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NEW YORK, February 6, 1923.

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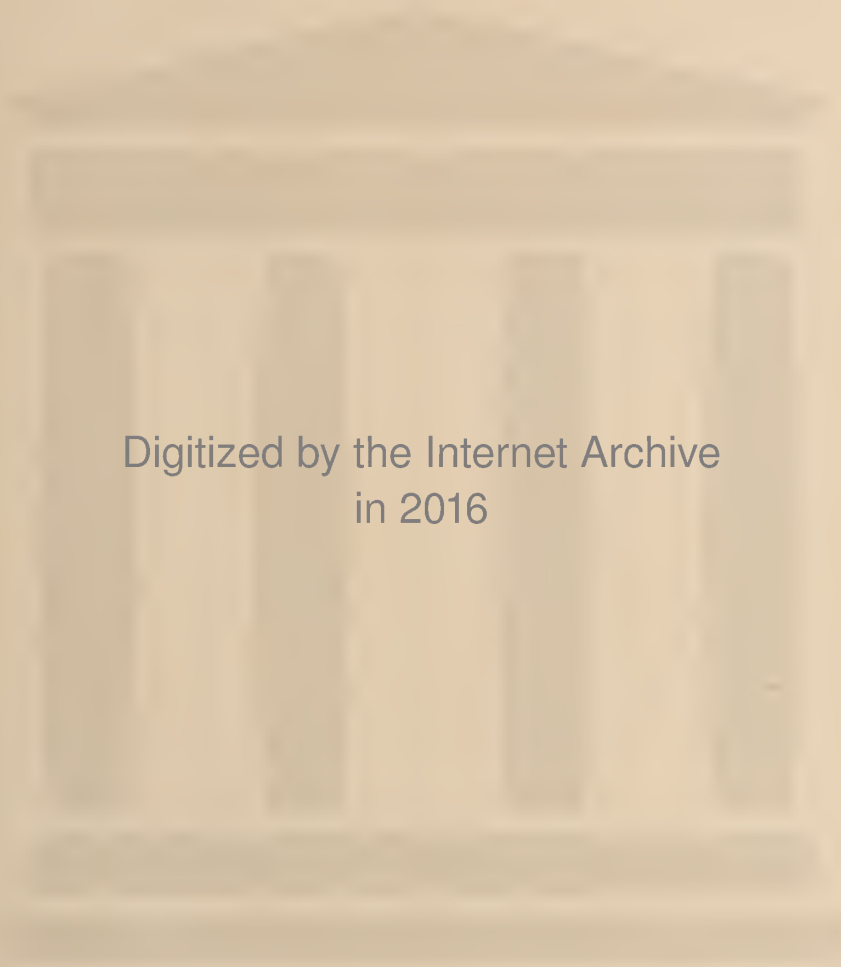
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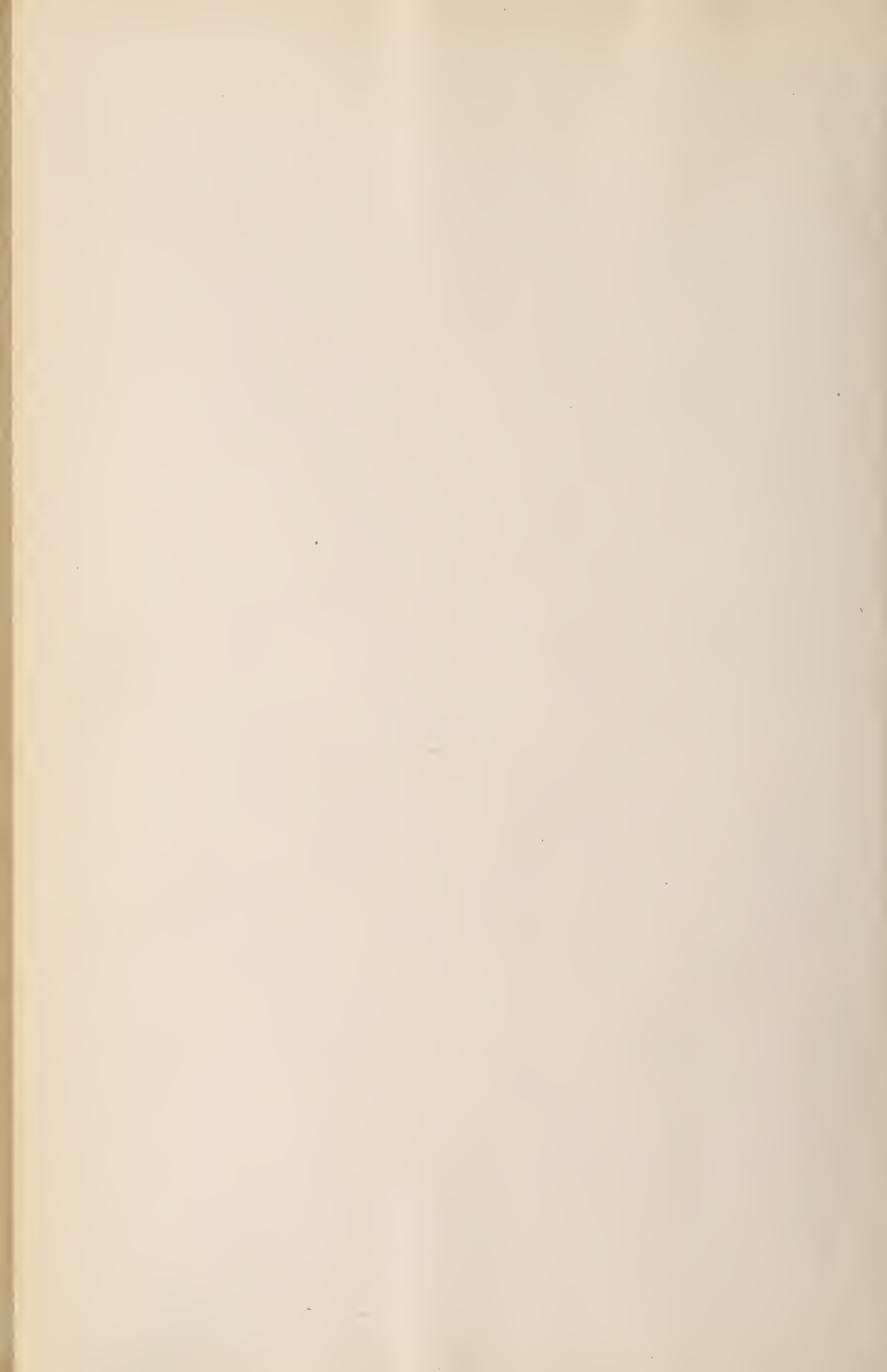
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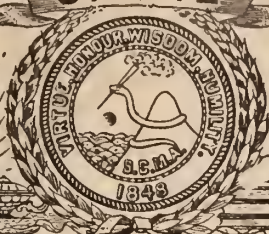


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The Journal

OF THE

South Carolina Medical Association



VOL. XVIII.

GREENVILLE, S. C., JANUARY, 1922

NO. 1

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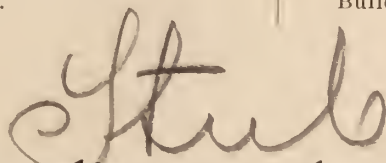
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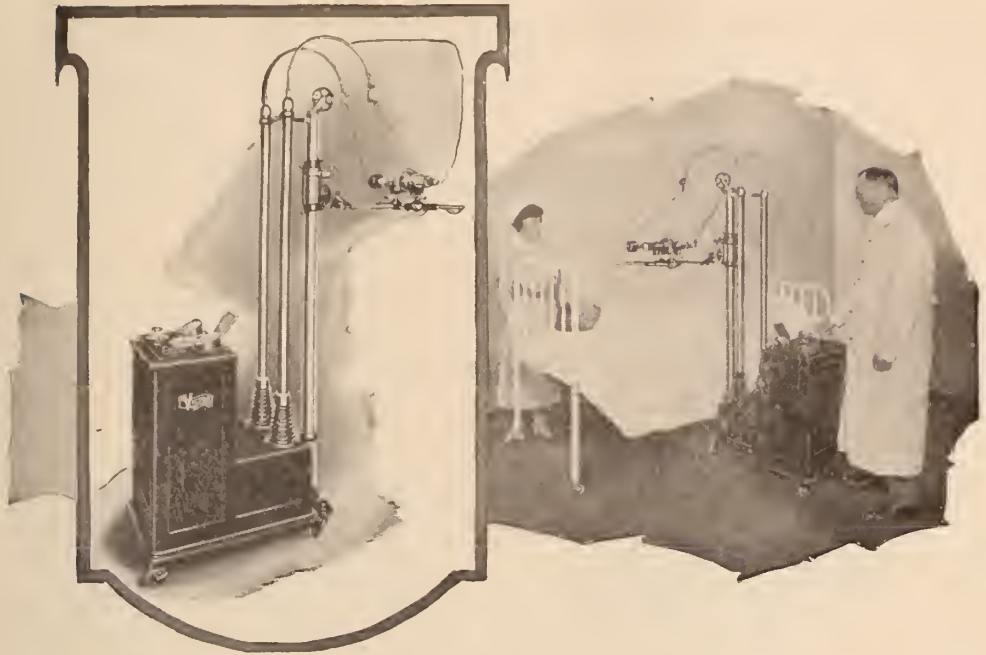
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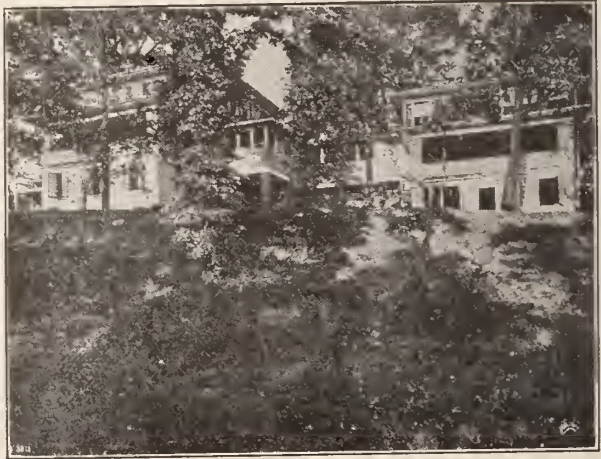
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The Journal OF THE South Carolina Medical Association



Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00. EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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EDITORIAL

**TRI-STATE MEETING NORFOLK,
VA., FEBRUARY 22-23, 1922.**

The next meeting of the Tri-State Medical Association of the Carolinas and Virginia will be held in Norfolk on Wednesday and Thursday, February 22 and 23, 1922. The Monticello Hotel will be headquarters. Dr. W. W. Fennell, Rock Hill, South Carolina, is President and Dr. Jas. K. Hall, Richmond, Virginia, is the Secretary-Treasurer.

**HOUSE OF DELEGATES TO MEET
AT 8 P. M., TUESDAY, APRIL 18**

The House of Delegates at its last meeting authorized the officers of the Association to so amend the by-laws that the House of Delegates in future might save the time of the delegates and yet accomplish the same results as formerly. The time, therefore, has been fixed at 8 P. M. instead of 10 A. M. The officers will request that all reports of committees be epitomized in order that the entire business of the

House and the election of officers may be concluded within three or four hours. The election of officers under the new by-law will be the last order of business. These changes have been made in order that the scientific sessions may occupy the two following days.

THE ROCK HILL MEETING

Much preparation has already been made by the officers of the Association looking to the success of the Rock Hill meeting. The Secretary has sent out a notice requesting titles of papers to be presented. The President has invited several guests of international reputation, among them Dr. Frank Billings of Chicago and Dr. Thomas S. Cullen of Johns Hopkins.

PUBLIC HEALTH INSTITUTE IN COLUMBIA GREAT SUCCESS

The Public Health Institute under the auspices of the U. S. Public Health Service and the State Board of Health held at Columbia, January 9th to 14th, attracted a large number of persons and was preeminently successful from every point of view. These Institutes serve admirably to bring to the attention of the public, and all others who should be interested in public health, the great forces now at work in the various fields of preventive medicine.

PAYMENT OF DUES—WILLIAMSBURG FIRST

Williamsburg is the banner county this year in the payment of dues to the State Medical Association. The county has been entirely reorganized and is doing good work. The dues are five dollars per member and the fiscal year begins January 1st.

COMMITTEES FOR 1922

In order that the members and various committees may be fully informed as to the personnel of the same, we republish this month the names of all the committees as appointed by the President:

1.—On Public Policy and Legislation: Dr. A. E. Boozer, chairman, Columbia; Dr. Fred Williams, Columbia; Dr. P. G. Ellisor, Newberry.

2.—On Necrology: Dr. R. C. Gyles, chairman, Blackville; Dr. R. O. McCutcheon, Bishopville; Dr. S. G. Love, Chester.

3.—On Scientific Work: Dr. W. F. R. Phillips, chairman, Charleston; Dr. J. W. Davis, Clinton; Dr. R. A. Marsh, Edgefield.

4.—On Hospital Standardization: Dr. Samuel Orr Black, chairman, Spartanburg; Dr. R. T. Ferguson, Gaffney; Dr. W. P. Turner, Greenwood; Dr. T. R. N. Wilson, Greenville; Dr. W. W. Fennell, Rock Hill.

5.—On Graduate Instruction: Dr. J. Heyward Gibbes, chairman, Columbia; Dr. R. E. Hughes, Laurens; Dr. Paul K. Switzer, Union.

6.—On Health and Public Instruction: Dr. F. A. Coward, chairman, Columbia; Dr. D. D. Frontis, Ridge Springs; Dr. E. C. Doyle, Seneca.

7.—On Child Welfare: Dr. A. A. Mood, chairman, Sumter; Dr. D. Lesesne Smith, Spartanburg; Dr. S. G. Glover, Greenville.

8.—On Study and Prevention of Tuberculosis: Dr. Ernest Cooper, chairman, Columbia; Dr. J. D. McDowell, York; Dr. M. L. Parler, Wedgefield.

9.—On Study and Prevention of Venereal Diseases: Dr. Milton Weinberg, chairman, Sumter; Dr. E. C. Baynard, Charleston; Dr. T. M. Davis, Greenville.

JOURNAL STAFF REORGANIZED
BY THE COUNCIL

Acting upon a request of the House of Delegates, the Council of the South Carolina Medical Association, Dr. L. O. Mauldin of Greenville, Chairman, met at Columbia in special session, January 9, 1922, for the purpose of devising ways and means of improving the Journal. After a report from the Secretary-Editor, showing the financial status of the Journal and the Association, the Council decided to reorganize the Associate Editorial Staff by electing one man to be the head of each department and the term of office to expire April, 1923. The following heads of departments were elected:

- Internal Medicine: Dr. George R. Wilkinson of Greenville.
- Pediatrics: Dr. Wm. P. Cornell of Columbia.
- Obstetrics and Gynecology: Dr. R. E. Seibels of Columbia.
- Urology: Dr. Milton Weinburg of Sumter.
- X-Ray: Dr. Floyd D. Rodgers of Columbia.

- Nervous and Mental Diseases: Dr. B. O. Whitten of Clinton.
- Surgery: Dr. S. O. Black of Spartanburg.
- Eye, Ear, Nose and Throat: Dr. W. C. Twitty of Rock Hill.
- Dermatology: Dr. J. Richard Allison of Columbia.
- Public Health: Dr. Leon Banov of Charleston.
- Anaesthesia: Dr. J. B. Townsend of Anderson.
- Pathology and Bacteriology: Dr. H. H. Plowden of Charleston.

It was hoped that with the decline in prices generally, the Journal would profit thereby. As usual, bids were sought from several reputable printers for the ensuing year, but there was practically no difference in the bids for 1922 over those of 1920 and 1921. The contract was awarded to the well-known firm of Peace Printing Company of Greenville, printers of the Journal for the past ten years or more. The Council will make every effort to further improve the Journal as conditions permit.

ORIGINAL ARTICLES

PES PLANUS OR FLAT FOOT

By Lee W. Milford, M. D., Anderson, S. C.

Anatomical Considerations: I wish to invite your attention first to some of the most prominent points in the anatomy of the foot which have direct bearing upon the subject under consideration. We must think of the human foot primarily as an active means of locomotion, and secondarily, as one of support. However, when used as a support in

standing we must not lose sight of the fact that the foot is not actually at rest, as it requires the activity of muscles to maintain even a standing position, properly. The normal foot is a complex structure which is capable of a great variety of movements, but for the moment we will consider the general appearance gained from different views of its outer aspect.

The legs and feet have been likened to two halves of a pedestal placed side

by side, one-half being the counterpart of the other, and each one necessary to the other to maintain the perfect poise of the body. We note that each foot rests upon the heel bone (*os Calcis*) which acts as a pivot and a base of support posteriorly. Passing forward, the bones clear the ground as far as the heads of the metatarsals except along the outer edges of the foot where the fifth metatarsal meets the ground at both ends. When the soft parts are added we have a bearing surface under the heel, continuing forward and narrowing down under the outer edge of the foot, then expanding again under the forward ends of the metatarsals. However, there is no bearing surface; hence no imprint under the inner aspect of the foot, which corresponds to the astragalus, the scaphoid, the internal cuneiform and the first metatarsal. When the two feet are brought together, then, there is formed a dome with its highest point usually under the scaphoid bones. Drawing a straight line from the middle of the heel through the middle of the great toe (Myer's line) we see that it corresponds to the so-called long arch of the foot, and passes through the more massive part which is depended upon for strength and propulsion. The thickness of the first metatarsal and great toe are in marked contrast to the smaller toes, which are not depended upon as much for locomotion as is the great toe. The two outer toes and metatarsals, together with the cuboid bone, form a spreading outward of the front part of the foot, which gives a substantial base on that side and tends to prevent a rolling of the ankle. There is no expansion of the toes on the inner side of the foot, but support is provided there by the opposite foot when the two are used together.

On account of the fact that most of

the disabilities that are encountered are on the inner margin, we are apt to think that nature has built a structure that is not substantial. However, when we consider the abnormal strains to which the civilized foot is subjected, we find ample reason for the "giving away" which occurs. Any other structure of the body would be affected if mistreated in a similar manner. The habit of "toeing out," improper posture in walking and standing, and the wearing of constricting footwear are responsible for many of the symptoms which are associated with the so-called "weak foot."

Although the arrangement of the bones is that of an arch from front to back, it must be noted that the half-dome of each foot arches in all directions also. So we note that there are not distinctly separate arches, but we use certain terms for convenience's sake to designate. Many bands of ligaments pass from one bone to another in the "longitudinal arch" as that part running from the front backward (anterior-posterior) and the "transverse arch," that part lying across the fore-foot under the metatarsal bones. Although the bones of the foot are arranged in such a manner as to form a framework for these arches, the structure would not be maintained in this position were it not for the support given by the ligaments and the action of certain muscles. In other words, if muscular action fails, undue stress is put upon the ligaments which stretch and permit the bones to become dislocated downward, resulting in the deformity known as "Flat Foot."

Many bands of ligaments pass from one bone to another in the foot and act as checks, but it must be remembered that ligamentous tissue is not elastic, and when subjected to constant tension or constant pressure will give way and permit displacement of the bones

involved. Thus, it will be seen that normal action of the muscles is of prime importance in order to prevent undue tension being transmitted to the ligaments. In case a sudden and violent tension is put upon the muscles and ligaments, the same results would be apparent as in the case of tension or pressure being exerted constantly. It is evident, then, that we must avoid not only a sudden strain to the muscles and ligaments, but also a constant tension. This means that careless and constant standing must be avoided; also footgear should be constructed in such a manner that it will not cause undue pressure or constriction of any part of the foot. In case of foot disabilities involving the structures mentioned, there is not only deformity produced, but generally pain and tenderness in addition. This is induced by the stress transmitted to the periosteum (Bone Covering) by the overstretched ligaments. Pain does not exist in the ligaments themselves, but periosteum being supplied with nerve filaments, they are very sensitive and when pulled upon unduly by the ligaments is the seat of pain.

Two important ligaments with which we have to deal are the long and short plantar, passing from the os calcis forward to the cuboid bone and base of the second, third, fourth and fifth metatarsals. These ligaments act as a "bow string" in assisting the maintenance of the long arch of the foot. If, through the loss of muscular power, or constant pressure, the plantar ligaments are stretched they, of course, lengthen and permit the downward displacement of the bones forming the framework of the arch. This results in the so-called "flat foot."

Flat Foot.

By the term "flat foot" we mean depression of the longitudinal or posterior arch. This may be accompanied by de-

pression of the transverse or anterior arch. As indicated in the anatomical discussion, there are really no separate arches of the foot, strictly speaking, but the arching is in all directions. However, for practical purposes we designate these arches as the longitudinal, or posterior, and the transverse, or anterior, arch, as a ready means of description. It is in these arches where the deformity is most apparent, although there may be subjective symptoms elsewhere. The term "weak foot" is sometimes used to designate the symptoms encountered in the flat foot. When "the arch" is spoken of, ordinarily it is intended to refer to the posterior or longitudinal arch.

Many cases of flat foot have their beginning in youth and are caused by lack of muscle tone; bad habits of posture; localized paralysis; and wearing of footgear that prevents free muscular action. Certain universal habits taught children, such as "toeing out," render the gradual development of flat foot more liable than if they were taught to stand and walk correctly. Also, many cases are sent to shoe dealers for correction, where they are usually fitted with a ready-made arch support and some freak shoe. This is doubtful "treatment," to say the least, and one which usually aggravates the trouble instead of relieving it. It is what we might call "passing the buck" to the shoe salesman, who is not trained to treat a pathological condition of this kind any more than he is to set a fracture, and is equally as bad as sending a patient to an optician instead of an oculist to have his eyes treated.

It is necessary to emphasize the fact that there may exist a considerable amount of mere lowering of the longitudinal arch without ever producing disability. What is of more importance than the height of the arch itself

are the symptoms associated with it. Some of the most important of these are pronation, eversion, rigidity; tenderness under the scaphoid, os calcis, and internal ankle bone (sustentaculum tali). Other disabling features are limitation of motion between the tarsal bones, at the ankle joint and in the toes. Further important symptoms may be due to arthritis or a weakening of the muscles from prolonged disuse or infectious diseases. It is important, therefore, to give due consideration to symptoms rather than to judge a foot by appearances alone.

In the case of obliteration of the transverse arch we find one or more of the following symptoms present: metatarsalgia (Morton's toe), callosities, claw toes, or flabbiness of the foot.

An abnormally high longitudinal if overstrained, may still retain its general shape yet be the seat of more pain than an arch that is quite flattened.

A man with a painful flat foot has a peculiar gait, walking with toes everted and a jerking forward and backward of the body. His walk is not springy and he does not make free use of his hips, knees and ankles. It appears as if he were afraid to place the weight of the body on his feet as they reach the ground. The walk is quite typical and different from the ordinary limp caused by a blister or abrasion of the foot. In cases of suspected malingering these points are of great value in reaching a decision. It is important that observation should be made without the knowledge of the patient. For the purpose of ready description we can classify flat foot as acute and chronic, and further divide these into subdivisions according to the cases involved.

(A) Acute Flat Foot—Etiology of: Sudden strains on the foot ligaments from an accident or overexertion placed upon the muscles of feet. A common

cause is strain of the ankle involving structures of the foot proper. Cases are liable to develop after fractures at the ankle or in the bones of the foot, "traumatic flat foot." We may place in this class the cases of weak feet which have really had their origin during battle, but do not develop as "flat feet" until the man has begun carrying heavy loads. Acute cases may also develop after a man has been confined to bed for a long period, particularly after typhoid fever and the infectious diseases.

Symptoms: These vary in intensity and consist of inability to stand for a long period, or to walk with a springy step, thus creating an awkward gait. Pain is usually present under the scaphoid bone and along the longitudinal arch and there are points of tenderness in that region and under the internal malleolus. The pain may extend up the muscles of the leg. On inspection it is noticed that the arch is depressed to a varying degree. This deformity may not be proportionate to the intensity of the subjective symptoms. When there has been much variation in the relation of the astragalus to the os calcis, or rotation of the scaphoid, the foot will be pronated and abducted, giving the appearance of a rolling inward of the ankle and eversion of the toes.

Treatment of Acute Cases: The quickest relief can be given these cases by the application of some form of support of the arch, at the same time abducting the foot. By support is not meant a rigid appliance such as sold in a shoe store, but some means by which the tired muscle and strained ligaments may be put at rest. The use of felt, gauze, pieces of blanket or heavy wool cloth is much better than any rigid material. A pad should be shaped so as to fit the longitudinal arch, running from the middle of the heels to

a point just back of the anterior ends of the metatarsal bones; the length should be four and a half inches and the width about two and a half inches, at the widest point, under the scaphoid bone; it should be about one-half inch thick. The forward end must be narrowed down to about one inch and a half and should not be placed under the first metatarsal-phalangeal joint. Of course the size of the support should vary according to the size of the foot. After placing the pad in position, the heel of the patient should be placed on the knee of the operator, patient's knee being fixed and foot turned in. The operator then applies strips of adhesive plaster one and one-half inches wide, beginning at point on the dorsum (top) of the foot just in front of the ankle joint, then passing around the outer edge and under the foot, over the padding, thence upward on the inside of the foot and across the lower end of the tibia and fibula to the outer side, ending over the fibula to the outer side, end-above the ankle.

During the strapping the foot should be well inverted. A bandage gives added strength to the adhesive. It should be started about the ankle, turning from the inside out, thence over the foot in such a way that the latter will be pulled inward, exerting force in the same direction as the adhesive strips. This treatment will throw the weight of the body on the outer side of the foot and tend to guide the fore-foot inward. The advantage of strapping over other methods is that it permits free use of muscles, at the same time guiding the foot into a position which relieves stress upon the ligaments. In other words, the parts which have been overtaxed are put at rest to a certain extent. For emergency treatment of a painful arch the strapping method has been used with good effect. It is also of value in

treating cases at work. When possible, an acute case should receive **absolute rest** in the early stages, the patient not being permitted to put weight upon the foot until the shoe has been altered.

Massage is of great value, given twice a day. Some acute cases will require hospital treatment, including the application of plaster Paris. Attention should be given to the shoes in all flat foot cases. The inner side of the heel should be raised at least one-quarter of an inch and the inner corner of the heel advanced forward half an inch. For the milder cases this is sufficient alteration, but it is often necessary to raise the inner side of the sole by a strip of leather running from toe to the shank. Another method sometimes used is placing a patch on the inner side of the sole under the first metatarso-phalangeal joint only. By these methods the foot is guided toward the inverted position. The patient should be directed to always walk with his feet straight ahead or even "toeing in." He should also practice rolling the feet on their outer edges, and be prohibited from placing his feet in the everted position.

When acute symptoms have subsided, the patient should be instructed in the foot gymnastics and taught how to massage his own feet and practice passive motion. The various exercises in the foot gymnastics are of the utmost importance and should be given in bare feet, under the direction of a competent instructor. Generally speaking, the exercise should consist of inversion movements of the entire foot and of the fore-foot; flexion and extension of the toes; rising upon the toes and squatting. The standing position should always be taken with the toes straight ahead and the feet about four inches apart. Attention must be given to the proper posture of the body in order to distribute the weight evenly on the heels

and balls of the foot. The head and chin must be held well up and every effort made to cultivate alertness in those being taught. Keg rolling is an excellent exercise, as it necessitates an inversion of the foot and bringing into play all of the muscles of the legs and feet. This is necessary in order that a man may retain his balance on the keg. Log walking with feet inverted is always a good exercise to practice. Grasping motions of the feet are of benefit. This is done by pushing the feet against the edge of a chair, or bar made for the purpose; the feet are inverted and the toes flexed and extended with a pushing motion on the fixed object. Patients should be impressed with the importance of walking properly, that is, by full use and freedom of motion at the hips, knees, and ankles. All exercise should be progressive, sufficient time being taken in the early stages so as not to produce fatigue.

Chronic Flat Foot. We may divide this into several groups. (a) Cases caused by gonorrhoea and other conditions of septic nature. (b) Cases with rigidity, brought about by osseous changes of an anarthritic nature, from an old injury or from other causes. Such cases do not often give pain, as the processes causing them have been gradual and the patient has become accustomed to the condition. However, if the condition develops, operative procedures should be instituted; but it is doubtful if the results will even render the patient capable of undertaking full duty again. (c) There is a class of flat foot cases in which the foot is held in an everted and pronated position by spasm of the pronei muscles which pass from the outer side of the leg to the outer side of the foot. Such cases usually have a good deal of pain and points of tenderness. They are also rare, but when they do occur an operation is usu-

ally necessary in order to bring about relief and normal position.

Treatment: As indicated, the treatment of chronic cases necessitates transferring the patient to a hospital where he should be placed under the care of an orthopedic surgeon, and should be kept at rest until such patients have received proper operative treatment and a full course in the after care as indicated under "foot gymnastics."

FITTING EYE-GLASSES AND SPECTACLES

By T. E. Wannamaker, Jr., M. D.,
Cheraw, S. C.

Wearing glasses is not a fad or passing fashion as one who possesses good vision might imagine. Few people have perfect eyes as careful examinations have shown.

A large number of children have defective vision, extreme cases manifested by cross-eyes, diseased lids, watery eyes, headaches, frequent styes, slow progress in school, many apparently with good vision due to a well developed ciliary muscle which they strain to its utmost with resulting nervous strain.

Practically all adults require glasses for reading or sewing or other close work at the age of 45. This is a normal condition even in eyes with perfect distant vision, because the ciliary or focusing muscle gives out at this time and a lens made of glass placed before the eyes supplies this need.

The ideal eye is one which at rest focuses images directly upon the retina. The hyperopic eye is a small eye, its antero-posterior diameter is too short, so rays of light do not focus upon the retina but at some

Read before the Chesterfield County Medical Society, November 8, 1921.

imaginary point behind the retina if such were possible and the image is blurred or indistinct as received by the retina and transmitted to the brain.

The myopic eye is a large eye, it's antero-posterior diameter is too long, so rays of light entering that eye meet or focus before they reach the retina, consequently these people hold print very close to the eye which causes the image to fall back nearer the retina to overcome their defect, they do not see at all well for distance.

Astigmatism is due to a faulty curvature of the cornea or lens. The curve is too great in one meridian and too flat in another meridian. This defect the eye can not overcome and is a constant cause of headache or poor vision. The proper lens worn regularly cures the headache and makes that eye normal.

The medical profession has neglected this field of work except in large cities. Only those who could afford it could pay expense of travelling and getting expert attention.

Who has been fitting glasses in your community for your patients? Are you interested in this part of their welfare? Can you co-operate with them in securing proper care of your patient's eyes? Do they know anything about the anatomy, physiology, or pathology of the eye? I dare say many do not know as much about the human eye as a first year medical student. These men attempt to cure eye defects. Some simple cases they can help, but who knows how many eyes are neglected for the lack of competent advice? These are not graduates of medicine but often jewelers, traveling opticians, low grade merchants, peddlers and the like.

My plea is that this is a medical field and medical men should do the work. Why medical men? Because

they know the anatomy, physiology, and pathology of the organ of vision. They know about the diseases affecting the human body and know the relationship between the eyes and other parts. Many a general disease is diagnosed by it's effects upon the eye. Think of Bright's disease, diabetes, syphilis, focal infection, brain tumor, and many others.

Why not permit other than physicians to examine eyes for glasses only? No one but a physician can use medicine in a person's eye. An eye especially in people who have an active ciliary muscle, those under forty-five, can not be thoroughly examined except that ciliary muscle be placed at rest by a mydriatic. This is especially true in the examination of children's eyes.

We use Atropine for children and usually homatropine for adults to prepare the eyes for examination.

A word now about the examination. The vision has been recorded before the use of drugs, the eyes now under the influence of a mydriatic, the patient is in the dark room. The ophthalmoscope is first used, by it we learn if light can enter the eye, if the media are clear, if opacities are present in the cornea, lens, or vitreous, if cataract is present, if there are hemorrhages in the retina, or if it is otherwise affected. We see the optic nerve as it enters the back of the eye, note it's appearance denoting choked disc, optic atrophy, optic neuritis etc. Then study the appearance of the retina, that delicate mirror upon which images are reflected and transmitted to the brain. We often find upon the retina dot like or larger hemorrhages which seriously impair vision. Many other abnormal conditions affecting the internal coats of the eye may be detected. Even the refracting state

of the eye can be learned by the ophthalmoscope.

Retinoscopy; This test follows next, it is the most reliable objective test for refraction of an eye now known. The eye must be under a mydriatic for thorough work. By a series of shadows thrown across the pupil and their movement neutralized by various lenses, the exact state of refraction can be determined if the test is accurately made. It is especially useful in detecting the amount of astigmatism and the meridian of same.

By test eard; This last test is the check on previous tests and is our chief guide in selecting the lense to be ordered. It is frequently wise to repeat this test after the mydriatic effect of medicine has worn off before ordering the glasses, as frequently the eye will not at once accept its full correction.

Several other tests are in use as competition leads men to use all sorts of machines both as a check on other methods and as a display to the public.

The tests I have described are in the reach of many doctors. The fitting of glasses is not a simple art nor is it so complex that patients must travel hundreds of miles for eye-glass service.

A PLEA FOR A MORE CAREFUL CONSIDERATION OF THE THERAPEUTIC EFFECT OF REMEDIES

**By L. O. Mauldin, M. D. Greenville,
S. C.**

Mr. Chairman and Fellow Members
of the Fourth District Medical Association:

Read before Fourth District Medical Association, Easley, S C., Sept. 16, 1921.

It is an indisputable fact that there has been great achievement in all lines of medicine in the past few decades.

Preventive medicine has made rapid strides and still presents an unlimited field for future development; surgery in the profession, is better organized than ever before and in its achievement is making history for medical progress faster than ever before in the history of mankind.

While merited praise is due to many other divisions and subdivisions of medicine it is very fitting that we should commend in highest terms the progress of preventive medicine and of surgery and lend a helping hand in every way possible to still further advance these great arms of medical science. However, mindful of a growing tendency on the part of some of the members of our profession to place in the back ground the great principle upon which Alopathic Medicine is founded, I have decided to enter a plea here to-day for the patient who is sick and cannot be remedied by preventive measures or by surgical procedures and call to your attention the fact that the practice of medicine is not a lost art nor a delusive science evolved from the dark ages, but it is a science and art thoroughly diffused with a living, breathing kinetic energy which is making great strides of progress and is only in the beginnings of great achievements which are unlimited in their future possibilities.

It is for the accomplishment of these achievements that I appeal to the medical profession with a plea for a more careful study of the therapeutic effect of remedies (Note the word remedies and not drugs is used). There is an unlimited field for such a study. In driving this thought home, need I remind you that in 1918 an epidemic

of Influenza swept over this and other countries as a result of which the people died like flies, while the scientific world stood aghast with no definite weapons with which to combat the onslaught of the terrible malady.

In the presence of such an overwhelming thought as this the emphatic question comes: "Have we any specific for influenza?" and the answer comes back with an emphatic No. The next great question is can the Medical Profession evolve a specific for this disease? The answer comes we believe that it can and will. Then it is up to the medical profession to work with more energy and more determination to find what is best for this disease as it has found the specific for Yellow Fever, Malarial Fever, Syphilis, Diphtheria, some of the Dysenteries, and many other distressing maladies which were not known more than thirty years ago and some not more than ten years ago.

In the treatment of this one disease of influenza, there is food to occupy the thought of Medical men for the next generation and the physician who works out a scientific cure for it based upon the principle of cause and effect is deserving of a monument so high and so grand that the Pyramids of Egypt would look like mere tombstones by the side of it.

In further substantiation of the importance of my Plea I regretfully remind you that we have no specific for Tuberculosis, Typhoid Fever, Diabetes, Pneumonia, Measles, Scarlet Fever and none for Cancer except early surgery and there are perhaps many other diseases for which the Medical Profession is destined to determine a remedy.

Some of these remedies may be worked out in the great laboratories of the country and some may be found by the humble physicians at the bedside of his patient. In this connection I would remind you that one of the greatest discoveries in medical history was conceived by an humble physician; Viz., Dr. Crawford W. Long of Georgia, who discovered the anaesthetic effect of ether.

In order to determine the specific for these diseases mentioned and many others not mentioned we must give greater attention to the therapeutic effect of all remedies. We need not forget the therapeutic effect of drugs ever bearing in mind the elective affinity of definite tissue cells for definite chemicals. We must remember that serum therapy, and its allied studies is in the front rank of the advancing thought of progressive medicine. We should give hydrotherapy a consideration in the treatment of some diseases.

We must remember that there is a great field for scientific research in Helio, Radio and Electro Therapy.

In conclusion I wish to say that by a more careful study of the causes of disease and the effect of remedies we are working at the foundation of medicine and hence at the beginning of medical progress and are bound to accomplish results in the future far beyond the conception of our most fancied expectations. To the end that each may accomplish in his own sphere his greatest purposes in the practice of medicine I plead for a more careful study of the therapeutic effect of remedies.

APPENDECTOMY AS RELIEF FOR A DEFINITE SYMPTOM COM- PLEX; WITH CASE REPORTS

By Carl B. Epps, M. D., Sumter, S. C.

A few years ago an appendix operation meant an operation for acute appendicitis. It was always a life saving procedure and done only in extreme cases. Nowadays, with our many improvements in diagnosis, and safe technique in surgery, the removal of an offending appendix is considered a very simple affair. It has even been whispered that possibly a perfectly innocent appendix has occasionally been cut down in its youth.

The vermiform appendix has been the object of much careful dissection, and close study as to the life history and general habits. And these investigations have thrown much light upon the role played by this interesting organ in the human economy. In the past few years much attention has been paid to that very delusive, elusive, and sometimes illusive condition called chronic appendicitis. It is with this pathological condition and its peculiar symptom complex that we will deal.

Every general practitioner has these cases, and without very careful investigation a true diagnosis will not be made. Many of these cases are catalogued as "nervous indigestion" and allowed to go at that. Pain, of a more or less irregular and mild nature, is usually felt somewhere in the abdomen. The pain is probably most often in the epigastric or mid-abdominal regions together with pain in the locality of the appendix. It has been stated that a pain confined chiefly to the right lower quadrant, and not as-

sociated with attacks of epigastric pain and nausea, is seldom due to appendicitis. It may not be a real pain, but simply a feeling of distress. This symptom is usually increased by food. In a larger number of these cases there is a pain or tenderness over McBurney's point upon pressure. The dilatation test of W. A. Bastedo is valuable in eliciting this symptom. A 12 inch colon tube is passed into the rectum and air injected with an atomizer bulb. If pain and tenderness is noted by fingerpoint pressure over McBurney's point as the colon distends with air it is considered a valuable sign of appendicitis. This test is especially helpful in vague cases where there are indefinite abdominal pains and points of tenderness. By dilatation these painful and tender spots are made to disappear while the symptoms really due to appendicitis are intensified.

Usually the general health and nutrition are impaired. Stubborn constipation is very common. More or less severe headache and vertigo are apt to be present. A disagreeable, so-called "bilious" taste and "bad breath" are complained of. The tongue, especially near its base is probably thickly furred. The face may have a peculiar or bloated appearance. Hundreds of these cases have been allowed to drift along under that handy cloak of ignorance diagnosis, "biliousness", or its more modern name sake "autointoxication." A chief danger is that while they are sailing along with the aid of frequent doses of calomel and "blue-mass" they may drift into the hurricane of acute appendicitis and sink upon the rock of perforation. Another sad fate that may overtake these unfortunates is that, wanting a better diagnosis, they may be labeled "neurasthenia." They

may suffer from coldness of the extremities, irritability, moroseness, mental apathy, and all the abdominal symptoms of neurasthenia. A peculiar "muscle sign" of chronic appendicitis has been described. It is claimed that there is a weakness and slight atrophy of the right abdominal muscles and that there is less resistance on the right. It is also stated that, in addition, there is in young people a left sided scoliosis, produced by constant leaning toward the affected side. These cases often present the typical symptoms of chronic indigestion, with belching, "sour stomach", heartburn", vomiting, palpitation of the heart, and a full, uneasy feeling soon after taking food. In these cases there is probably a gastritis with hyperacidity, etc., associated with chronic appendicitis.

The diagnosis of chronic appendicitis may be easy in certain cases while in others presents great difficulties. In the female the pain or tenderness in the right iliac fossa has to be differentiated from tubal or ovarian disease. The history of the case and vaginal examination may be sufficient to distinguish between the two. The Bastedo dilatation test mentioned above may help us here. The blood count may be an aid in certain cases of chronic appendicitis. A history of constipation is very often present.

One of our greatest aids in diagnosis is the X-Ray. By its use we can discover the size, shape, and position of the appendix in a great many cases. It also indicated adhesions, kinks, and obliterations. We can also observe its mobility, especially with the fluoroscope. The Lane kink and Jackson's membrane, which are so often associated with chronic appendicitis, may be noted with the X-Ray. By use of the Barium meal after a dose of castor

oil we may observe the filling and emptying of the appendix. The normal appendix fills and empties about the same time as the Caecum. It may fill and empty repeatedly while the Caecum is full. Continued contractions and spasm are a sign of active inflammation. In some of cases the presence of concretions or other foreign bodies, may be located in the appendix. It may help in determining the connection between the appendix and certain spots of tenderness. Delay in emptying after the caecum is empty is a suspicious sign. The obliterated appendix may continue to give distressing symptoms. There may be reflex symptoms due to imitation of the nervous mechanism of the appendix, the so-called "dyspeptic" type of appendix. The local symptoms are due to mesentery and peritoneal contraction, and inflammatory bands or adhesions affecting the appendix, caecum, ileum, or ascending colon. There are also the so-called "consecutive" symptoms, general and local, consequent upon disturbed function of the ileocecal region.

Many cases of chronic appendicitis give a clean history of a previous acute attack, but others can give no such history.

The prognosis of chronic appendicitis is always doubtful. The chances that a first or second acute attack will return are about 77 per cent. In chronic cases the liability of perforation during an acute exacerbation is much greater owing to the diseased condition caused by the chronic inflammation.

The treatment of chronic, as of acute, appendicitis is surgical. Medical treatment is quite unsatisfactory and dangerous. About the only valid contraindications to operation are severe pulmonary disease, uncompensated heart

lesion, and certain states of lowered vitality due to constitutional disease. Even some of these cases can safely be operated upon by use of local anaesthesia

The post-operative prognosis is good. It has been found by following up different series of these cases that from 70 to 75 per cent are absolutely cured by operation, while a large per cent of the others are benefitted to a greater or less extent.

I have operated upon a good many cases of chronic appendicitis, and so far, every operation has given satisfactory relief. I will mention three cases here: Case 1: White man, age about 35, married, referred by Dr. T. R. Littlejohn. Indefinite abdominal pains, especially in region of appendix. Symptoms of indigestion and general poor health. X-ray indicated chronic appendicitis. He made a rapid recovery and improvement was immediate. He was completely relieved of all of his pain and other distress, and has had no return of it so far as I have learned. This operation was performed in August, 1920.

Case 2: White man, about 40, married. Suffered with rather acute pain at times over appendix. Very distressing symptoms of indigestion, with belching, "sour stomach," etc. Terrible headaches that required morphine to relieve them at times. The X-ray indicated inflammation with adhesions. He had nausea and pain over appendix but no fever. The appendix was literally buried deep in that fossa, and mildly inflamed. The benefit derived in this case was remarkable. Practically all of his indigestion symptoms disappeared and his headaches are much less often or severe. Operation last December.

Case 3: White woman, age about 25, single. General health poor, suffered very severe attacks of urticaria cover-

ing entire body. Had symptoms of chronic indigestion, loss of appetite and very nervous. Dr. W. E. Mills had X-ray picture made, which indicated adhesions and a distinct kink in the appendix. Operation verified the X-ray findings. There were bands of adhesions on both sides of the appendix, one band causing a sharp kink in the appendix. This operation was done only recently, but the patient says she already feels much improved, and has a splendid appetite.

TREATMENT OF ACUTE EMPYEMA

By J. R. Boling, M. D., Columbia, S. C.

I am going to adhere strictly to the treatment of acute empyema, leaving the chronic condition with its many problems alone, as the acute stage gives us sufficient food for very extensive study and it is well worth our while to thoroughly familiarize ourselves with it so that we may see fewer cases of the chronic form.

The treatment of the acute condition might be divided into the closed and the open methods. It has only been during the past year or two that the closed method has been used with any success. By the closed method I mean when the pleura is drained through small tube without other opening. This has many points in its favor. First the instigation of this drainage cannot be dignified by name of an operation, for even in the extremely ill it causes practically no shock, there is no loss of blood, little or no air enters the cavity, the dangers of a secondary infection are greatly reduced, and there is less likelihood of a sinus left. However, it is not best in those that cannot have hospital attention during entire time of drainage, when there

Read before the Second District Medical Association, St. Matthews, S. C., July 20, 1921.

seems to be more than one pocket of pus, or where the cavity connects with bronchial system.

In those that this method is decided upon we first aspirate (at time of operation) to definitely locate pus, then insert under local anaesthetic cannula capable of carrying a stiff rubber tube about 20 F in size. The trocar is withdrawn and tube quickly inserted, then cannula withdrawn, leaving tube in place. The tissues contract about tube, making an air tight connection. The tube is then connected with regular pressure apparatus in form of syphon. Very little suction is created, but enough to keep cavity constantly drained of air, pus, or secretion. The cavity is then washed out with Dakin's solution, this being injected through one arm of tube every two hours during day and three times during night. Drainage is cut off for one-half hour after each injection so that solution will remain in cavity for that length of time. Once daily cavity is flushed out thoroughly with solution, using large syringe until return is clear. Under this treatment the temperature falls rapidly, appetite improves, with a corresponding improvement in general condition. The solution causes no pain and the patient can be kept dry and clean. Progress is determined by character of discharge and by bacteria count. When count is negative for three days, solution is discontinued, following day if count is still negative, tube is withdrawn. Three cases we have treated in this manner have average of eighteen days drainage with no recurrence. In an article of F. M. Mause, based on 177 cases treated by various methods, sixty-five were treated by rib resection with mortality of 54 per cent, while those treated by aspiration and delayed thorocotomy fell to 32 per cent. By the Mazingo method, the es-

entials being the same as closed method I just described, of 43 cases treated all recovered, only one requiring secondary operation.

Now on consideration of the open method of treatment we find that study by the Empyema Commission, at Camp Lee, has taught us a most important lesson in that it is not always wise to do any radical operation immediately purulent fluid is found in chest. This being especially true of the hemolytic streptococci type that we saw so much of during the epidemic of influenza. In these sero-purulent fluid is found early in the pneumonia while the patient is very ill with high temperature, extreme toxemia, etc. Any operation here is associated with grave danger. Now the accepted treatment is to aspirate, withdrawing two liters or more in large accumulations, this being repeated every two to six days. Usually by the end of the second week the fluid is frank pus, the pneumonia has markedly improved, and the general condition greatly benefited. When this stage has been reached it is safe to resect rib. This can usually be done under local anaesthetic. We are accustomed to making incision at right angles to the rib to be resected. About two inches of rib is then removed and finger inserted to open any other pockets that may be. It is important that opening be at dependent portion of cavity. It will sometimes be necessary to resect rib lower down to attain this. One finger in first opening will guide us in selecting next rib to resect. Stiff rubber tubes are inserted in both openings and cavity flushed with Dakin's solution. Everett Graham (3), has demonstrated that there is not a complete collapse of the lung on opening the pleura, as so long taught. The exact ratio between vital capacity of lung and opening in chest can be definitely calculated. Thus an average

chest of 2700 cu. cm. can withstand opening of eight square inches. It makes no difference if opening is unilateral or bilateral so long as the combined area is no larger than the calculated amount for safety.

Let me emphasize the importance of fresh air and nourishment. They should be on the porch if this is available; if not, then in a well opened room. As for the nutrition, R. D. Bell (4), of Empyema Commission, has made the observation that unless special attention is paid to the diet there is likely to be a negative nitrogen balance amounting to a deficit of as much as 15 grams per day. A negative nitrogen balance is always found when diet consists of 1500 to 1700 calories per day. This being true it is not remarkable that patient should lose out, and should this continue we have the added load of starvation to be carried along by the already overloaded system. If diet is pushed so that patient gets 3300 to 3500 calories per day there is an actual increase in nitrogen, and the fighting forces are correspondingly increased. The appetite is usually good after the febrile stage but even during this considerable good can be given in form of liquids, especially those containing lactose.

SUMMARY: In majority of cases the closed method is one of choice on account of lack of shock, lessened danger of secondary infection, and cleanliness. Where the closed method is selected do not be in too great a hurry to resect rib if the condition is poor from active pneumonia. Aspirate until condition improves.

Keep in mind the fact that nutrition is one of your greatest allies.

1. Minnesota Medical Journal, 1920, III, 124.

2. and 4. Journal. A. M. A., 1918, IXXI, 366.

3. Surg. Gyn. & Obst., 1920, XXXI, No. 1.

GOITRE

By J. P. Shearer, M. D., Florence, S. C.

The term "Goitre" is used rather loosely to designate any pathological condition of the thyroid gland, and is used by both physicians and laity in this sense.

The thyroid gland, as you know, is one of the ductless glands. It is found in the anterior part of the neck, lying in front of the trachea, and just below the cricoid cartilage. Anteriorly, the gland is covered by the sterno hyoid and the sterno thyroid muscles as well as by the platysma and the subcutaneous tissue. Anatomically the thyroid gland is shaped like the letter H, consisting of two lateral lobes, one lying on each side of the neck. These lobes are connected by the isthmus which lies just in front of the trachea. The weight of the thyroid gland is approximately one ounce and due to its anatomical position, the normal thyroid is not palpable. The blood supply of the gland consists of the superior and inferior thyroid arteries, which entered the gland at the superior and inferior poles, respectively. The blood supply is very rich, and this increases in pathological conditions, particularly in the hyperplastic type.

Lying in the posterior capsule of the lateral lobes, two on either side, are the parathyroid bodies, which are necessary for the maintenance of life in some manner which is not thoroughly understood at present. These four bodies are each the size of a millet seed, and have a definite capsule and a separate blood

Read before the Pee Dee Medical Society, November 22, 1921.

supply. Extirpation of the parathyroids produces tetany and death. For this reason, these small bodies are very important in the surgical treatment of goitre.

Microscopically the thyroid has a definite capsule of connective tissue. The structure of the gland consists of small vesicles or acini, lined with low epithelium. The lumina of these vesicles is filled with colloid material which is rich in iodine. The thyroid has no ducts but the secretion of the gland is thrown directly into the blood stream.

The thyroid has many important functions, but perhaps the most important is to regulate the metabolism of the body—to be more explicit—to regulate the anabolism and the katabolism which is going on in the cells of the tissue. The internal secretion is a hormone which acts as a chemical activator of the metabolism of the cells. The active principle of this hormone is thyroxin which was isolated in 1914, and made synthetically in 1916 by Kendall of the Mayo Clinic. Thyroxin is rich in iodine and forms the main constituent of the secretion of the thyroid. Normally the amount of thyroxin secreted is regulated so that the proper amount is in the tissues, but in pathological conditions involving the thyroid, the amount of thyroxin in the blood and tissues is decreased or increased, as the case may be, causing changes in metabolism. The average daily exhaustion of thyroxin in the tissues is estimated by Plummer to represent between 0.5 and 1 mg.

Complete extirpation of the thyroid causes rapidly increasing cachexia, going on to death in a very short time. This makes it impossible to remove the entire thyroid gland in disease, and increases the difficulty of surgical procedure. A partial lobectomy, rather than a complete removal of the gland

must be done in operations on the thyroid.

The study of the pathologic conditions of the thyroid is of comparatively recent date. Moibus in 1887 first called attention to the connection existing between the hyperplasia of the thyroid and exophthalmic goitre, although the clinical entity of exophthalmic goitre had been described by Graves in 1835.

It is interesting to find, however, that the first operation on the thyroid of which there is any record was done by Albucasis in 330 A. D. The account of this operation says that the hemorrhage was controlled by ligature and a hot iron. Kocher, in 1883 standardized the operation of thyroid lobectomy which is the standard operation, with a few changes, practised today.

A great amount of confusion regarding the etiology of goitre exists at the present time. It is a well known fact that goitres occur in different sections of the country, and this is particularly true of the colloid type. The fact that goitres appear in belts is explained in various ways, but the view held by most authorities is that it is due to a deficiency in the iodine constituent of the soil and water. The increase in the size of the thyroid is a compensatory increase due to the iodine deficiency in the tissues. Other workers believe that the thyroid condition is the result of a low grade infection, and that the foci of infection play their role in goitre.

When we come to classify the diseases of the thyroid, we have three main groups and several smaller groups which are less frequent. The three main groups are: (1) Colloid goitre; (2) Adenoma; (3) Exophthalmic. The minor groups are: (1) New growths; (2) Acute inflammatory conditions, or acute thyroiditis; (3) syphilis.

Plummer of the Mayo Clinic, after a thorough study of goitre, believes that

there are only these three main groups and that all of the clinical pictures seen can be placed in one of these groups, although mixtures of the different types may occur, and may be difficult to place.

These three groups, however, are quite different in pathology, symptomatology and treatment, as we shall see. The facilities we have at our command to aid us in diagnosing these different diseases of the thyroid, and particularly in differentiating true hyperthyroidism from the nervous patient with symptoms stimulating those of hyperthyroidism, which latter very often is difficult, are as follows: (1) Accurate pulse chart. The true hyperthyroidism is accompanied by a true and persistent tachycardia. For the practitioner without hospital facilities at his command this fact is of great help. A simple test that can be carried out in any home is to put the patient in whom a hyperthyroidism is suspected in bed under absolute rest and keep a careful pulse chart. If the condition is true hyperthyroidism, the pulse will continue to be high, whereas if the condition is nervous in origin, the pulse rate will drop after 24 or 48 hours rest.

(2) The adrenalin or Goetsch test. This is based on the fact that the patient with increased thyroid activity is susceptible to adrenalin. The test consists of injecting a small amount of adrenalin subcutaneously and taking the pulse, blood pressure and respiration for the next thirty minutes or hour following the injection. A positive test is one in which the pulse, respiration and blood pressure show a definite increase.

(3) The estimation of the basal metabolism. This is the latest test added to the list, and is the greatest laboratory adjunct we have in making a diagnosis in the questionable cases.

Let us now go on and take up the

three main types of goitre separately:

Colloid Goitre—By this type of goitre, as the term implies, we mean a goitre that is made up largely of increase in the amount of colloid. Colloid goitre is found in young people, and is rarely found in people over 30. The simple goitre of adolescence belongs in this group. Clinically, the symmetrical enlargement of the entire gland, the soft granular feel, the absence of symptoms of toxemia and of nervous symptoms, except perhaps worry over the size of the goitre, are all very important and aid one in distinguishing this type. The basal metabolic rate is normal or below normal, and the Goetsch test may, or may not be, positive. The microscopic examination of the thyroid tissue in colloid goitre shows a marked increase in the amount of colloid present. The acini are filled with colloid and the epithelium lining the acini is flattened out, probably due to the pressure of the colloid pressing upon them from within. This colloid type of goitre is one of the main types found in the so-called goitre districts in this country and abroad. The treatment is medical and not surgical, except in cases where the size of the goitre acts as a handicap to the patient. The medical treatment consists in giving iodides and thyroxin with the idea that the increase of the colloid in the thyroid shows a deficiency of iodine and thyroxin in the body, with a compensatory increase in the amount of colloid material secreted into the acini. Hence, iodine and thyroxin are given to supply this deficiency.

Marine and Kimball of Cleveland have reported the results of their work among the school children of Akron. They found that a large percentage of the school children of this city presented small colloid goitres, and the report shows that iodides diminished the size of the goitres, and also acted as a pro-

phylactic in children in whom there were no goitres present. His method of administration is to give sodium iodide in three grain doses a day for ten days, each spring and fall. This acted as a prophylactic dose. They tested out the efficacy of this treatment by putting half of the children on treatment, and keeping the other half as a check.

Colloid goitre will respond readily to iodine and will diminish in size. If a goitre taken to be colloid does not diminish in size under iodine therapy, the chances are the goitre is adenomatous, or of a mixed type.

If the colloid goitre is removed surgically, iodides should be given following the operation, for the enlargement returns rapidly after removal, unless treated. For, as was said before, it is impossible to remove the entire gland, and following a partial lobectomy in colloid goitre, the remaining thyroid tissue increases very rapidly unless the iodine deficiency of the body is supplied by medication.

Adenomatous Goitre—This is the most common type of goitre, and most large goitres that one sees are of this type. These come on in middle life as a rule, but their presence probably dates back to early childhood, and perhaps to the presence of foetal rests in the thyroid.

Clinically, we have two main types of adenomata—the toxic and the non-toxic. In both, the thyroid is irregularly enlarged and the adenoma may be single or multiple, cystic, hard and firm, or calcareous, depending upon the changes which it has undergone.

Of course, the symptoms of the non-toxic types are those of pressure, plus namely, dysphagia, dyspnoea, and voice changes, whereas the symptoms of the toxic types are those of pressure, plus the signs of toxemia of which more will be said later.

Twenty-three per cent of the patients coming to the Mayo Clinic suffering with goitre of the adenomatous type have symptoms of toxemia and the average time of appearance of the toxic symptoms is sixteen years after the goitre was first felt.

Plummer, of the Mayo Clinic, was the first to point out the clinical entity of hyperthyroidism associated with adenoma. Prior to his work, no differentiation was made between the hyperthyroidism resulting from toxic adenopathy and the hyperthyroidism resulting from hyperplasia.

The main distinguishing features of this type of goitre are: (1) The toxic symptoms are rare under thirty. (2) The metabolic rate is increased although it is not as high as in exophthalmic goitre. (3) The cardiovascular system and particularly the myocardium suffers early whereas in exophthalmic goitre the nervous system is more apt to be affected first. These myocardial changes are manifested by palpitation, arrhythmia, dyspnoea, oedema, and high blood pressure, except in the last stages, when the blood pressure is low. (4) The absence of exophthalmos is conspicuous in the presence of tremor, flushed moist skin, tachycardia, and loss of weight and strength.

In this type of goitre, the treatment is surgical and consists in the removal of the adenomata either by enucleation, or by a subtotal lobectomy, leaving behind only normal thyroid tissue. In some cases this is rather difficult for all of the thyroid tissue seems to be replaced by small adenomata.

A thyroidectomy should not be advised in young people under twenty-five, presenting adenomatous goitre, because no symptoms appear until after thirty, and it is impossible to remove all of the diseased thyroid in many cases on account of the extensive involvement of the gland. Furthermore,

quite a few of the adenoma present in young girls disappear without operation. However, the fact that all cancer of the thyroid starts in a pre-existing adenoma should be borne in mind when the patient with a simple adenoma is advised against surgical treatment. The proper treatment in people under twenty-five is to keep the goitre under observation and remove it if it increases in size or begins to show any signs of toxæmia. If the patient is not seen until past thirty years of age, operation should be advised without hesitancy.

The treatment of the adenomatous type with hyperthyroidism is surgical, unless the cardiovascular system has undergone so much damage that the patient is not a good surgical risk. In these cases with cardiovascular changes, treatment of rest in bed and digitalis therapy preliminary to operation is important.

Exophthalmic Goitre—Graves Disease—Basedow's Disease. In this type of goitre we have our most dreaded type. This is a disease of the third and fourth decade, and may be ushered in very suddenly or the onset may be insidious. The course of the disease is characterized by periods of rest and periods of activity, the latter which we term thyroid crisis and very often we claim a cure in a patient who merely is going into a period of rest after a severe crisis.

The four classical symptoms of exophthalmic goitre, namely nervousness, fine tremor, tachycardia and a palpable tumor, you are all familiar with, and added to them have the flushed moist skin, the loss of strength and weight, and the increase in the metabolic rate in a well developed case.

The periods of acute hyperthyroidism, or crises, are characteristic and during these crises, marked damage to the nervous system and heart may oc-

cur, so much so that the patient becomes an invalid.

The thyroid gland in the exophthalmic type is symmetrically enlarged, and hard; also the blood supply is greatly increased, causing an increase in the size of the thyroid vessels, and an increase in the amount of blood circulating through the gland. This produces the typical bruit heard over the gland. The increase in the blood supply of the gland in the hyperplastic goitre is more than in the toxic adenomata.

Microscopically, the gland shows a hyperplasia of the epithelium of the acini with an increase in the depth of each cell. The amount of colloid is very much decreased. The same microscopic picture is seen in any part of the gland, in other words, the entire gland is affected.

The treatment of the exophthalmic type of goitre is a very much debated question at the present time, the surgeons, the medical men, and the X-ray men all claiming the proper method of treatment. I am quoting Dr. Crile of Cleveland, perhaps the greatest authority on the treatment of goitre, in saying that in his opinion the greatest number of cures in exophthalmic goitre is obtained by the surgical treatment. And in his clinic in Cleveland, the surgical treatment of goitre is worked out to a high degree of efficiency. His often quoted statement of "stealing the goitre," explains just his method of treatment. He aims to operate on his patients without their knowing about it. By his method of anociation he ligates one superior thyroid artery at a time under combined anaesthetic of novocaine and nitrous-oxide, usually with the patient in bed, and only after the patient has been prepared for the ligation by rest in bed and digitalis therapy. Following the ligations, after a variable period, depending on the way

the patient reacts to the ligations, a partial lobectomy, perhaps each side at different times, is done in the same manner as the ligations. With this method of treatment, Crile has reported recently that he had done 227 consecutive thyroidectomies and 180 consecutive ligations, that is, 407 consecutive thyroid operations for hyperthyroidism without a death. And he states that these were not selected cases, and that no patient was rejected and many were in a dying state from the effects of long standing hyperthyroidism. He also reports that in his last 500 thyroidectomies, there have been five deaths, making a mortality rate of one per cent. This recent report shows, I think, that the surgical treatment of goitre, if properly carried out is safe.

The method of surgical treatment, that is, whether an immediate bilateral partial lobectomy at one sitting, or whether a preliminary ligation of the thyroid vessels depends entirely upon the condition of the patient. The ligation is done with two purposes in view, first, to determine the way the patient will react to surgery and, second, to temporarily cut off the blood supply to the thyroid, and in this way decrease the amount of thyroid activity.

No patient should be treated surgically during a crisis, as they are always poor surgical risks during these periods. The patient should always be treated by absolute rest in bed until the crisis is over, and the estimation of the basal metabolic rate together with the pulse rate and the general condition of the patient, are the points that aid us in determining the fitness of the patient for surgical procedures.

The latter three conditions of the thyroid, namely, the acute inflammatory conditions, the carcinoma, and syphilis merely demand mention.

Balfour has pointed out that one per

cent of all goitres removed at the Mayo Clinic show carcinoma. He also emphasizes the point that the carcinoma always follows in an adenoma and never in the colloid or exophthalmic type. For this reason we should always bear in mind the possibility of cancer developing in later life when a patient presents herself with a non-toxic adenoma. In carcinoma, the symptoms of pressure are very severe and early involvement of the recurrent laryngeal nerve producing hoarseness is characteristic.

The treatment of cancer of the thyroid is a complete excision of the carcinomatous tissue, if possible, with thorough radium treatment following the operation. In many patients complete excision is impossible and then radium therapy alone is all that can be done. The prognosis in cancer of the thyroid is bad despite any type of treatment that may be employed. Early involvement of the mediastinum and early metastases are common.

Besides these conditions of the thyroid enumerated above, we have the very important clinical entity of hypothyroidism, which is the opposite picture of hyperthyroidism. Just as hyperthyroidism is due to a decrease in the amount of thyroxin in the blood and tissues, so is hypothyroidism due to a decreased amount of thyroxin in the blood and tissues. This decrease in the amount of thyroxin is due to a deficiency in the amount secreted by the thyroid either due to some intrinsic disease of the thyroid, or to the removal of too much thyroid at operation.

We have two types of hypothyroidism—myxedema and cretinism, depending upon the time in the life of the patient the thyroxin was decreased. Cretinism is due to a congenitally hypofunctioning thyroid, whereas, myxedema is due to a hypofunctioning thyroid starting in adult life. To enter far into these

conditions would take us too far afield into the realms of endocrinology and suffice it to say here that thyroxin in graduated doses is the specific for these manifestations of hypothyroidism. Plummer says that a daily oral dose of 1.6 mg. of thyroxin will hold the basal metabolism of most thyroidless individuals within the normal limits.

SUMMARY.—(1) The study of the different types of goitre is of comparatively recent date.

(2) Plummer divides all goitres into three main types—(1) Colloid goitres; (2) Adenomata; (3) Exophthalmic. Carcinoma, syphilis and acute thyroiditis are rarer conditions found in the thyroid.

(3) Colloid goitre is a disease of young people, and adolescence, and is treated medically.

(4) Adenomata may be toxic or non-toxic. The toxic adenoma causes cardio-vascular changes early. The treat-

ment is surgical, except in young patients, and in these the adenoma should be watched very carefully.

(5) Exophthalmic goitre is a disease of the third and fourth decades, characterized by periods of crises and remissions. The nervous and cardio vascular systems are affected early. The treatment is surgical and consists of preliminary ligations and partial lobectomies done at different sittings. The operative mortality is low, and surgery affords the most cures.

(6) Carcinoma of the thyroid occurs in one per cent of all cases in the Mayo Clinic, and always occurs in adenoma. The prognosis is poor, and the treatment is surgery and radium.

(7) Hypothyroidism is a clinical entity produced by a decreased amount of thyroxin in the blood and tissues and manifests itself in the form of myxoedema and cretinism. The treatment is thyroxin.

STATE BOARD OF MEDICAL EXAMINERS

QUESTIONS BY THE STATE BOARD OF MEDICAL EXAMINERS OF SOUTH CAROLINA FOR PHYSICIANS

PEDIATRICS. Dr. Frank Lander, Examiner, Nov. 1921.

1. Give symptoms and treatment of Pyloric stenosis. From what condition must one differentiate it and how?

2. Discuss enuresis, pyelitis, orthostatic albuminuria, tubercular peritonitis.

3. Discuss the use and abuse of Diptheria Antitoxin.

4. What is your earliest positive sign in Pertussis? What treatment do you suggest?

5. Adenoids. (b) Acidosis. (c) Kernig (d) Brudzinski. (e) Babinski.

6. Bronchopneumonia.

7. Describe and treat any heart lesion seen in childhood.

8. In a child of 30 days give normal temperature pulse respiration W. B. C. In a child of 5 years what is the average W. B. C. in Pneumonia, Empyema, Influenza, Tuberculosis, Typhoid Fever, Pertussis.

9. Polio myelitis.

10. How do you recognize and treat enlarged Thymus gland?

GYNECOLOGY.

1. Discuss Neisser infection from the view point of gynecology.

2. Name and describe the most common uterine displacements.

3. Give cause and treatment of metrorrhagia, amenorrhea, leucorrhea.

4. Why does nausea so often accompany dysmenorrhea.

5. How would you treat acute left ovarian pain?

(Take any four of the five)

OBSTETRICS. Dr. J. R. Miller, Examiner, Nov. 1921.

1. Give the signs of pregnancy and state the value of each.

2. Name some diseases to which pregnancy predisposes.

3. Name some diseases that might be mistaken for pregnancy, Give differential diagnosis.

4. How often should urine be examined during pregnancy? What is the significance of albumin in the urine during pregnancy? Give treatment for this condition.

5. What means are employed to prevent abortion?

6. Define the three stages of labor.

7. Give the duties and the procedure adopted by the physician in normal labor.

8. Are the dangers of an abortion or miscarriage more than those of a full term delivery? If so, why?

9. When is placenta designated "retained placenta"? How would you deal with a retained placenta?

10. Define version. What are the indications? What methods?

CHEMISTRY, HYGIENE, SANITATION AND STATE MEDICINE

Dr. G. B. Edwards, Examiner, Nov. 1921.

1. Define weight and name three systems of weight.

2. Describe the terms (a) effervescence (b) efflorescence and (c) deliquescence.

3. Name five acid and five salt compounds used in medicine with their formulas.

4. Name five coal-tar products useful in medicine and for what used.

5. What is the normal chemical reaction of (a) saliva. (b) gastric juice, (c) pancreatic juice, (d) blood, (e) bile, (f) tears, and (g) urine.

6. Mention the methods to be employed for preventing malaria and epidemics of yellow fever.

7. How would you instruct a patient suffering from tuberculosis, and state the best means of disinfecting sputum.

8. If you were asked to locate a re-

sort for consumptives name six factors you would require.

9. Describe the prophylaxis of the filth diseases.

10. Define from a hygienic sense a nuisance, and name some.

11. What physical conditions of patients would you advise against the taking of a Turkish bath?

12. What precautions should a physician observe and what principal measures should he employ for the prevention of the spread of infectious diseases?

ANATOMY. Dr. J. S. Matthews, Examiner. Nov. 1921.

1. Describe the thorax briefly. Give the attachments of the diaphragm.

2. What is the pharynx? What muscle elevates it?

3. Name the muscles of male perineum.

4. What important functions has the arachnoid membrane?

5. Give location on interior chest wall expect to find the cardiac valve. of the point beneath which you would

PHYSIOLOGY

1. What causes the beat or pulsation of the heart?

2. Describe by diagram or otherwise a transverse section of the spinal cord, dorsal region.

3. Describe the lymphatic system and give its function.

4. Where and how is the blood changed from arterial to venous, and from venous to arterial.

5. State the functions of the following glands. (a) lacrimal, (b) mesenteric, (c) prostate, (d) parotid, (e) thyroid.

6. Describe the individual action of the several ferments of the pancreatic juice.

SURGERY. Dr. J. H. Taylor, Examiner, Nov. 1921.

1. Early symptoms of a ruptured abdominal viscus. Late symptoms of same.

2. Diagnosis of early venal tuberculosis.

3. Symptoms and pathology of Hodgkin's disease.

4. Early symptoms of carcinoma of the body of uterus. What advice would you give as regards treatment.

5. Predisposing causes and symptoms

of Pulmonary embolus. Name the sequelae.

6. Symptoms of fracture of middle and anterior fossae of base of skull.

7. Significance of blood in the urine.

8. Discuss shock and its treatment.

9 & 10. Clinical Cases.

BACTERIOLOGY. Dr. Baxter Haynes, Examiner, Nov. 1921.

1. Stain a specimen by Gram's method.

2. What are bacteria? How do they multiply?

3. Describe the causative germ of meningitis.

4. On examining a smear from an acute conjunctivitis, what bacteria would you expect to find.

5. Some epidemics of diphtheria are very mild, others very virulent; state the bacterial cause.

PATHOLOGY

1. Explain cause of rise of temperature.

2. Name most prominent tissue change in the aged.

3. Describe lung tissue in the second stage of Lobar Pneumonia.

4. Give the blood picture of a strong man suffering with acute gangrenous appendicitis.

5. Discuss Inflammation.

QUESTIONS BY THE STATE BOARD OF MEDICAL EXAMINERS OF SOUTH CAROLINA FOR NURSES

NURSES. DIETETICS. Dr. Frank Lander, Examiner. Nov. 1921.

1. How should meat be cooked in order to retain its juices? (b) In order to extract its juices?

2. Why is milk called a perfect food? (b) Why is lime water sometimes added to cow's milk?

3. Name some foods which you would omit in the following diseases and state your reasons. Diarrhoea, Obesity, Diabetes

4. Preparation and administration of a nutrient enema.

5. Outline a diet to relieve a constipation in a child two years old. (b) In an adult.

6. What is pasteurized milk? Modified milk? Certified milk?

7. Which is more easily digested and

why—broiled meat or fried meat? Describe broiling and frying.

8. Select cuts of meat for the following purposes: (a) beef tea, (b) roast beef, (c) tender steak.

9. Classify alcoholic beverages. What is their use in diet?

10. For a laborer weighing 150 pounds. how many calories per day are required? What is a calorie?

NURSES, OBSTETRICS. Dr. J. R. Miller, Examiner. Nov. 1921.

1. What is the placenta and what are its functions?

2. Describe the proper care of the breasts during pregnancy before labor, and after delivery.

3. Describe preparation of patient and of bed for labor and describe in a general way the proper surroundings of labor patient.

4. What is the "bag of waters"? What is its function? What is a dry labor?

5. What care does a mother require after delivery?

6. Upon which side is a new born babe to be placed and why?

7. How is the probable date of delivery estimated?

8. Give a list of articles needed by a physician in attendance upon a patient during labor.

9. Tell how you would care for the new born infant's eyes. Give reason for your care.

10. What is post partum bleeding and what must the nurse do?

NURSES, MATERIA MEDICA, THERAPEUTICS AND PRACTICE. Dr. J. T. Taylor, Examiner, Nov. 1921.

1. Give cause and treatment of bed sores.

2. Give what you consider the best method to produce emesis.

3. What is the normal pulse count in a healthy adult?

4. In the absence of a physician, what would you do for a child suffering with spasmodic croup?

5. Define, name, and give dose one of each of the following. a. Cathartics. b. Cardiac Stimulants. c. Diuretics. d. Emetics.

NURSES SURGERY. Dr. J. H. Taylor, Examiner. Nov. 1921

1. What symptoms would make you suspect cancer of uterus?

2. Symptoms of postoperative hemorrhage and treatment in absence of a doctor.

3. (a) What do you mean by hypodermoclysis and why is it used?

(b) What do you mean by transfusion?

4. Detail preparation of room, dressings and instruments in emergency curettage in a country home.

5. Define the following: (a) Simple fracture. (b) Compound fracture. (c) Comminuted fracture.

NURSES. HYGIENE AND SANITATION. Dr. G. B. Edwards, Exam. Nov. 1921.

1. Describe personal hygiene.

2. Name five personal conditions which might have a tendency to undermine the health.

3. What are the principal factors essential to maintain good health?

4. What important rules should a nurse observe in regard to herself when nursing an infectious disease?

5. What important places and articles about a home should be kept clean to prevent disease?

6. What do you understand is meant by public hygiene?

7. Name the disadvantages and advantages that exist in country and city districts.

8. Why is sunlight important as a hygienic agent?

9. Describe an ice box that can be made at a very little expense for use in a poor home where there is a bottle fed baby.

10. Describe the difference between the way malaria is spread by the mosquito and typhoid fever by the house fly.

11. Why is screening a home necessary?

12. What is the object in ventilating a home or school-room?

NURSES. ANATOMY AND PHYSIOLOGY. Dr. J. S. Matthews, Exam. Nov. 1921.

1. What bones form the shoulder girdle? (a) Describe the clavicle.

2. What two kinds of muscle have we in the body? (a) Give example of each.

3. What important functions do the abdominal muscles assist in performing?

4. Where would you make pressure in a lacerated limb if an artery was severed?

5. What is the function hemoglobin? (a) plasma?

6. What organs constitute the digestive system?

7. How many temporary teeth are there? (a) when erupted?

8. Describe the characteristics of normal urine.

9. What is the nerve of (a) smell, (b) taste, (c) sight?

10. What are the mammary glands—their function?

NEWS ITEMS

The Thompson Memorial Building, of the Roper Hospital, Charleston, has been completed. This will be known as the Riverside Infirmary. The old building will be remodeled and used as a nurses' home.

A meeting of the Fifth District Medical Association was held in Winnsboro October 20. The following are officers

of the Association: Dr. W. R. Wallace, President; Dr. G. W. Poovey and Dr. W. M. Love, Vice Presidents; Dr. G. A. Hennies, Secretary-Treasurer.

Williamsburg County Medical Society has elected the following officers: Dr. W. G. Gamble, President; Dr. E. T. Kelley, Vice President; Dr. B. M. Montgomery, Secretary-Treasurer.

At the first meeting of the Greenville City Hospital staff in 1922 the following officers were elected:

Doctors R. C. Bruce, president; J. L. Anderson, vice president; J. D. Guess, secretary. The medical committee was appointed and is as follows: Doctors L. O. Mauldin, J. W. Curry, A. E. Brown, J. D. Guess and T. M. Davis.

The committee on educational nursing was appointed and is as follows: Doctors T. R. Wilson, Geo. Wilkerson and S. G. Glover.

Heads of hospital departments for the months of January and February: Surgical, J. W. Curry; medical, C. C. Ariail; eye, ear, nose and throat, R. E. Houston, G. U., T. M. Davis; obstret-
rical, W. M. Burdette; pediatric, S. G. Glover; gastroenteric, J. W. Parker.

A new hospital at a cost of about \$350,000 will be erected in New Orleans for treatment of diseases of the eye, ear, nose and throat.

The New York Post-Graduate Medical School and Hospital announces that there are now available several scholarships under the terms of the Oliver-Rea endowment. The purpose of the endowment is to further graduate medical education by awarding scholarships to practicing physicians of the United States. Applications may be sent to the dean of the New York Post-Graduate Medical School and Hospital, Twentieth street and Second avenue, New York City.

A memorial was unveiled at Verona, September 25th, to Cesare Lombrose. He was professor of psychiatry at Turin, but was born at Verona. Twenty-three nations contributed to the fund for erection of the monument.

The Medical Society of New Jersey is submitting questionnaires to legis-

lative candidates, at the same time setting forth the contention, "We have no propaganda and no selfish scheme." Among the questions are: "Will you favor the principle of uniform requirements for the license to practice healing from all who assume thereby uniform responsibilities in prevention, diagnosis and treatment of disease?" and "Do you favor the principle of publicity before enactment of all proposed health legislation, so as to afford equal opportunity for display of all facts, as well as opinions?"

Regulations of the traffic in sutures and surgical material is contemplated in a bill introduced in the House of Representatives by Congressman Johnson of Washington. Shipment in interstate or foreign commerce of suture or ligature material without sterilization labels or that is not packed in containers against contamination is forbidden. Every manufacturer must hold a license granted by the Secretary of the Treasury.

Six states, Delaware, Minnesota, New Hampshire, New Mexico, Pennsylvania and South Dakota, have passed laws accepting the maternity bill, recently signed by President Harding.

The National Health Exposition, occupying 60,000 feet of floor space, will be held in the Jefferson County Armory, Louisville, February 1-9, 1922. This is under the auspices of the United States Health Service, State Board of Health of Kentucky, Jefferson County Board of Health and the Health Department of the City of Louisville.

At the annual meeting of the Kentucky State Medical Association held Sept. 27-29, at Louisville, it was resolved to use the property bequeathed by Mrs. Elizabeth S. Irvine at Rich-

mond, for a home for indigent physicians of Kentucky and their dependents.

A memorial hospital for children in honor of James Whitecomb Riley will be built in Indianapolis from funds collected by the school children of the state during the month of October.

The organization of the Ancient Arabic Order, Nobles of the Mystic Shrine of Savannah, has pledged itself to the expenditure of \$10,000,000 for the care and cure of crippled children regardless of color, creed or sex.

The University of Missouri has received an appropriation of \$250,000 for the erection of a university hospital at Columbia.

Dr. W. H. Erb, professor emeritus of clinical medicine at Heidelberg, died recently at the age of eighty-one.

According to a recent action taken by the joint hospital and charities committees of the city council, the proposed cancer hospital and clinic at Grady Hospital, Atlanta, will be entirely apart from the control of the hospital and charities committee of the city council and will be supervised by the trustees

for Mr. Steiner, husband of the late Aloert Steiner, whose bequest of \$500,000 made possible the clinic. This will make Grady the first hospital south of Baltimore to be especially equipped for the treatment of cancer.

A loan fund of \$10,000 for the benefit of students (to be used without interest for six years), in the Leland Stanford Junior University School of Medicine, San Francisco, has been established by Mrs. Sadie Dernham Patek, of San Francisco.

November 10, at Chicago, Dr. A. D. Bevan, as President of the American Medical Association during the war, received from the French government the Order of the Legion of Honor. More than 200 physicians assembled at a banquet to witness the conferring of this distinction. Dr. Frank Billings of Chicago presided over the meeting.

A meeting was held in Washington recently for the purpose of organizing the Association of Reserve Officers, U. S. Public Health Service. The purpose of the organization is to promote better co-operation among its members, and to establish the greatest interest in the treatment and care of disabled men and women of the World War.

SOCIETY REPORTS

GREENVILLE COUNTY

Death of Dr. W. S. Pack.

Following are the resolutions adopted by the Greenville County Medical Society:

Whereas, an Allwise Providence has taken from our midst Dr. W. S. Pack, be it

Resolved, That the Greenville County Medical Society in his death is conscious of a loss which the society has no adequate method of expressing. He was one of the oldest members of this body and took an active interest in its affairs.

We feel that not only the society is much the poorer for his passing, but that the community at large will miss him sorely and a host of warm and loyal friends among his professional clientele will sadly mourn his death. Be it further

Resolved, That we extend to his immediate family our deepest and most sincere sympathy for them in their bereavement. Also that a copy of these resolutions be given to both the daily papers and spread on the minutes of our society.

Respectfully,

Greenville County Medical Society.

L. O. MAULDIN,

J. L. ANDERSON,

CHAS. W. GENTRY,

Committee.

OCONEE COUNTY

Death of Dr. J. J. Thode

Dr. John J. Thode of Walhalla died January 3, 1922. Dr. Thode was a member of the Oconee County Medical Society and had practiced medicine

about forty years. He will be especially missed by the people of moderate or meagre means, whom he served with a fidelity that was marked by all, often giving his professional services with absolutely no hope of financial reward.

MARLBORO COUNTY

Program, January 5, 1922, Bennettsville, S. C.

Invocation, Rev. Geo. M. Wilcox.

Meeting called to order and introduction of speakers, Dr. Douglas Jennings, President Marlboro County Medical Society.

Minutes of last meeting, Dr. D. D. Strauss, Secretary Marlboro County Medical Society.

Welcome, Dr. C. R. May, Councillor Sixth Medical District.

X-Ray and Radium in Malignancy, Dr. A. Robert Taft, Charleston, S. C.

Restoration of Function in Gynecological Surgery, Dr. Wm. D. James, Hamlet, N. C.

Treatment of Ureteral Calculi, Dr. R. L. Pittman, Fayetteville, N. C.

Prostatectomy, Dr. G. Fleming McInnes, Charleston, S. C.

Association of the Upper Pee Dee Physicians, Dr. T. E. Wannamaker, Cheraw, S. C.

Dr. D. D. Strauss, Sec.,
Bennettsville, S. C.

WILLIAMSBURG COUNTY

Date of meeting, December 8, 1921. President W.G. Gamble in chair. Roll call, number present 8; number on roll 12. Minutes read and approved. This meeting was devoted principally to the election of officers for 1922, which re-

sulted as follows: W. G. Gamble, President; W. C. Rogers, Vice-president; B. M. Montgomery, Secretary-Treasurer.

Dr. Harper read before the members assembled the Constitution and By-laws drafted for the Williamsburg County Medical Society by a committee consisting of W. M. O'Bryan, T. C. Harper and B. M. Montgomery, which document was approved and accepted by the society.

It was agreed that the election of delegate and alternate to represent the Society in the House of Delegates be postponed until March, 1922.

B. M. Montgomery, Secretary.

CHESTERFIELD COUNTY

Date of meeting, November 8, 1921. President R. L. Gardner in chair. Roll call, number present 5; number on roll 8. Minutes read and approved.

Dr. T. E. Wannamaker, Jr., read an interesting paper on Fitting Eye Glasses and Spectacles.

Dr. C. R. May, Counsellor of this district, was with us, and several subjects of interest were discussed by all present.

C. H. Purvis, Secretary.

SUMTER COUNTY NOVEMBER MEETING

The Sumter County Medical Society has just held an interesting meeting. At this meeting we had by special invitation the graduate nurses of the city also of the Tuomey Hospital. The program which was a symposium on Cancer was as follows:

1. Cancer of the Lip, Tongue and Bucca Membranes, by Dr. Sophia Brunson.

2. Cancer of the Oesophagus, Stomach, and Duodenum, by Dr. W. E. Mills.

3. Cancer of the Rectum, Large and Small Intestines, by Dr. H. M. Stuckey.

4. Cancer of the Breast, by Dr. J. A. Mood.

5. Cancer of the Ureterus and Appendages, by Dr. C. J. Lemmon.

6. Malignancy in Children, by Dr. H. A. Mood.

7. Malignancy of Bones, by Dr. Archie China.

8. Cancer of the Genito-Urinary Tract, by Dr. Milton Weinberg.

These papers were enjoyed by all and discussed by Drs. J. A. Mood, Epps, Stuckey, Lemmon and others.

The meeting adjourned for supper at the Palmetto Cafe. The above named nurses accompanied the Physicians to said supper which was greatly enjoyed by all present, the ladies adding much to the pleasure of the evening.

H. L. Shaw, Secretary.

NEWBERRY COUNTY

Date of meeting December 16, 1921. President J. M. Kibler in chair Roll call, number present 9; number on roll 19. Minutes read and approved.

Dr. William A. Boyd of Columbia reported the following cases in detail: Perthes Disease of the Hip. Recurrent dislocation of Hip. Potts Disease with Paraplegia. Spastic Flat Foot.

Dr. B. E. Kneese of Newberry and Dr. J. H. Moore of Whitmire were elected members of our Society for 1922.

John K. Wicker, Secretary.

BOOK REVIEWS

THE COLLECTED PAPERS OF MAYO CLINIC 1920—THE USE OF X-RAY AND RADIUM AS SHOWN IN THIS.

By A. Robert Taft, M. D., Charleston, S. C.

P. P. Vinson, in an article, A method of applying Radium in cases of Esophageal cancer states that no condition is more grave and as these cases are of frequent occurrence anything which offers slightest chance of cure should be thoroughly tested. Radical operations have been universally unsuccessful. Dilatations afford only temporary relief.

Dr. Vinson suggests a very practical method of placing Radium in place by use of swallowed thread.

He says that sufficient time has not elapsed to state positive results. R. D. Carman in the Roentgen Diagnosis and localization of Peptic Ulcer, points out that the Surgeon sees his ulcer the Medical man does not but the X-ray goes far to equalizing this and furthermore it will be the means of recognition of disease earlier which is of great importance from the standpoint of diagnosis and treatment. No other organ has been accused of so many disorders it has never had. He thinks the impression that the symptomatology of Duodenal ulcer is more exact than that of Gastric ulcer is not due to any more exactness in symptoms but to the fact that Duodenal ulcer is four times as common. The Ray will not of course tell difference between simple and malignant ulcer.

From July 1918 to January 1919, 3890 stomachs were examined. The diagnosis of ulcer was confirmed in 98.21 percent of cases at operation.

A negative diagnosis was confirmed in 95 percent. The localization was correct in 95 percent of cases. These findings clearly indicate that the X-ray examination has an exactness that the clinical findings lack. Dr. C. H. Mayo in discussing an article entitled Gastric and Duodenal ulcers says the Roentgenogram gives valuable aid in the diagnosis of gastro-jejunal ulcer in about 80 percent of cases.

G. B. Eusterman in a clinical study of Gastrojejunal ulcers, says the Roentgenologic findings are of primary importance and often render a diagnosis conclusive.

Dr. Carman in the Roentgenology of Tuberculous Enterocolitis says the early symptoms of ulcerative tuberculous colitis are not sufficiently characteristic to make possible a definite clinical diagnosis even in the presence of Pulmonary Tuberculosis. If any benefit is come from the treatment it is imperative that the disease be recognized early and for this recognition the Roentgen Ray furnishes the most certain means as yet available.

Even the finding of the bacilli in the stools is of no value. Therefore every patient with indefinite abdominal complaint should have a complete roentgenologic and general clinical examination. He gives methods of examination, signs and reports of many cases. J. C. Masson in an article on Diverticu-

litis of the large intestine gives full credit to X-ray for diagnosis.

Dr. Braasch in an article on occluded Renal tuberculosis, says the Roentgenographic examination of the urinary tract has repeatedly called our attention to the condition of closed renal tuberculosis which would otherwise have been clinically overlooked.

Dr. Braasch in another article Roentgen examination of the Urinary tract made opaque tells how solutions of silver were first used, then Thorium and finally the Iodides and Bromides.

He mentions dangers and that this work should be confined to the hands of the experienced Urologist and Roentgenologist but as he says the value of Urography in selected cases of Hydronephrosis, nephrolithiasis, pyelonephritis, neoplasm and anomaly is unquestioned. Cystography is also very useful in recognizing Diverticulum and occasionally where for technical reasons an enlarged prostate makes cystoscopy difficult, the use of opaque solution may aid us in diagnosis. The cysto-uretogram may be of some value in certain cases, particularly if there is marked inflammatory dilatation of the Renal pelvis and ureter and if the cystoscopic examination is unsatisfactory.

Drs. Judd and Sistrunk suggests in an article on the Surgical treatment of malignancies of the bladder that putting Radium indiscriminately into the bladder does more harm than good and if Radium does as much good on epithelioma of the bladder as it does of the cervix when directly applied and it probably would, it would be best to do a suprapubic operation. This would provide drainage and be means of applying Radium directly to the tumor.

He believes that Radium should be used only on the inoperable cases. Radium treatment in 600 cases of Menor-

rhagia. is the title of article by Dr. Leda J. Stacy. She says that surgery is choice for young women, for those who have a normal sized uterus but history suggestive uterine polyp or small submucous fibroid, or history suspicious of malignancy of the fundus. Also large Fibroids as a certain means of quickly removing the tumor without possibility of degenerative changes occurring later. It has been their policy to limit Radium the size of three and one-half to four months. pregnancy, unless there is a definite contraindication to operation in large tumors.

Pregnancy may occur in small percentage after the use of Radium.

H. H. Bowing in Radium and X-ray therapy in inoperable Carcinoma of the Cervix; says that 10,000 die each year in this country from Carcinoma of the Uterus. Radium therapy is filling a much desired want at this time. Many inoperable cases are helped and a few are cured. Cases are on record more than 5 years a good number and one at Curie Institute 13 years.

X-ray is also of much value in controlling metastatic involvements. J. De J. Pemberton in an article on Surgery on Substernal and Intrathoracic Goiter shows X-ray plates and mentions use of Fluoroscope as being of great importance in making diagnosis.

An article on Spina Bifida by Dr. H. W. Woltman includes Radiograms which show Lesion in the bony canal.

Dr. W. L. Benedict in "Early Diagnosis of Pituitary Tumor" says, Roentgenography of the head with especial attention to changes in the configuration of the sella turcica is of value in determining the extent of the damage to neighborhood structures and, as changes in the sella are commonly found to exist in Pituitary Tumor, it

adds important evidence of the presence of such a tumor. It is well known that enlargement of the sella however and even destruction of certain of its parts may result from other intracranial disorders. Likewise, a pituitary tumor of some size may be present and cause characteristic ocular pneumonia without in any way changing the sella so as to make it appear abnormal by roentgenographic inspection. Six of our patients showed no sella changes.

Another article by Dr. Benedict—"The Value of Dental Examinations in The Treatment of Ocular Disorders." shows Radiogram of teeth illustrating cases.

In "Malignant Tumors of The Antrum," Dr. New describes the cautery operation followed by the insertion of Radium into the cavity. This combination treatment of 18 patients has resulted in apparent cure of 10 over periods of 18 to 28 months.

Dr. B. S. Gardner in "Roentgenology in Diseases of The Teeth," insists on full mouth roentgenograms, not only of all the teeth, but spaces where teeth have been removed. He also urges that the dental roentgenologist should observe the extraction of teeth that show pathology for his advice and also for his edification.

Dr. W. S. Lemmon in "Abscess of The Lung" says, certainly the roentgen ray evidence is an invaluable aid in the diagnosis, especially in the aspiration cases, for in these there is a tendency toward a single large abscess in which a fluid level can be visualized.

Roentgenograms illustrating "Tumors of The Bony Chest Wall" by Dr. Hedblom are shown.

X-ray pictures are shown illustrating "Non-union of The Humerus" by Dr. M. S. Henderson. Also Dr. Myer-

ding's article on "Delayed Union And Non-union of Radius And Ulna.

Roentgenograms of "Tuberculosis of The Knee Joint in Children" by Dr. Henderson, also in "Old Fractures" and in "The Use Of Beef Bone Screws" by Dr. Henderson are shown.

Drs. Carmen and Carriek have a very exhaustive article on "The Roentgenologic Aspects of Ostitis Deformans".

Dr. H. H. Bowing in "Topical Applications of Radium" describes technique in cancer of the breast, Sarcoma, Hodgkins disease, Tubercular Adenitis and Leukemia.

One reading this volume I am sure would feel that these agents were being more appreciated and used than ever before. But that as diagnostic methods the X-ray had not in any way displaced any clinical method or the therapeutic use of this or Radium any fixed surgical procedure but had only helped to aid these in many cases.

THE SURGICAL CLINICS OF NORTH AMERICA

(The Mayo Number)

The Surgical Clinics of North America (Issued serially, one number every other month) Value I Number 5. (The Mayo Clinic Number) 296 pages, with 163 illustrations. Per clinic year (February 1921 to December 1921). Paper \$12.00 net; Cloth \$16.00 net. Philadelphia and London. W. B. Saunders Company.

DONALD C. BALFOUR The Use of the Actual Cauter in Treating Benign Lesions of the Stomach and Duodenum --Page 1233
FRED W. RANKIN AND CHARLES H. MAYO Gastrojejunal Fistulas following Gastro-Enterostomy -----Page 1241
CHARLES H. MAYO The Formation of a Cloaca in the Treatment of Exstrophy of the Bladder -----Page 1257
E. STARR JUDD Adenomyoma Presenting as a Tumor of the Bladder --Page 1271
LOUIS B. WILSON Illustrative Cases of Malignant Tumors of the Thyroid --Page 1291

WILLIAM J. MAYO Splenic Syndromes -----Page 1307

WALTER E. SISTRUNK Cancer of the Breast -----Page 1503
Cysts of the Thyroglossal Tract --Page 1509
Tumor of the Parotid Gland --Page 1515
Elephantiasis -----Page 1523

CLINICAL DIAGNOSIS

A Text-Book of

Clinical Microscopy and Clinical Chemistry for Medical Students, Laboratory Workers, and Practitioners of Medicine.

By

CHARLES PHILLIPS EMERSON, A. B., M. D.

Late resident physician, The Johns Hopkins Hospital; and Associate in Medicine, The Johns Hopkins University; Professor of Medicine, Indiana University School of Medicine.

156 Illustrations. Fifth Edition Entirely Rewritten and Reset. Philadelphia and London. J. B. Lippincott Company. Price \$7.50.

Ten years have passed since the last edition of this book appeared. As regards its contents this certainly is a new work. So much new material has appeared during the past ten years that a complete rewriting of the entire volume has been necessary and several new sections have been added, among them, those of serology, bacteriology, chemistry of the blood and of the spinal fluid.

MEDICAL CLINICS OF NORTH AMERICA

(The Mayo Number)

THE MEDICAL CLINICS OF NORTH AMERICA Volume V Number II (The Mayo Number, September 1921) Octavo of 317 pages, 80 illustrations. Philadelphia and London: W. B. Saunders Company, 1921, published Bi-Monthly. Price per Clinic year: Paper, \$12.00. Cloth, 16.00.

Among the best articles in this issue are the following:

WILLIS S. LEMON AND ARLIE R. BARNES Clinical and Surgical Experience in Diseases of the Chest with Special Reference to Pneumothorax---Page 295
 RUSSELL D. CARMAN Primary Cancer of the Lung From the Roentgenologic Viewpoint -----Page 307
 HENRY S. PLUMMER AND PORTER P. VINSON Cardiopasm: A report of 301 Cases -----Page 355
 DAVID M. BERKMAN Preoperative Management in Cases of Gastric Retention -----Page 411
 LEDA J. STACY AND EDWARD G. JOSEPH The Treatment of Dysmenorrhea -----Page 473
 EDWARD C. ROSENOW Results of Experimental Studies on Focal Infection and Elective Localization -----Page 573

NOSTRUMS AND QUACKERY

Articles on the Nostrum Evil, Quackery and Allied Matters Affecting the Public Health; Reprinted, With or Without Modification, from The Journal of the American Medical Association.

Prepared, Compiled or Edited by Arthur J. Cramp, M. D.

Director of the Propaganda Department and Bureau of Investigation of The Journal of the American Medical Association.

VOLUME II

Press of American Medical Association
 Five Hundred and Thirty-Five North Dearborn Street, Chicago, 1921.

"Nostrums and Quackery" was published by the American Medical Association in the belief not only that the information is contained ought to go to the public but also that the public desired just such information. The best evidence that this belief was justified is the necessity of issuing a second edition in less than a year. The second edition is larger by about two hundred pages. Much entirely new matter has been added and a large portion of the material that appeared in the first edition has been brought down to date.

Quackery does not die easily. Exposures of the frauds perpetrated by quacks and nostrum venders do good only to the extent that such exposes educate the public. When the veil of mystery is torn from the medical faker the naked sordidness and inherent worthlessness that remains suffices to make quackery its own greatest condemnation. This is the mission on which "Nostrums and Quackery" has been sent forth.

HISTORY OF MEDICINE (New Third Edition). History of Medicine, with Medical Chronology, Suggestions for Study and Bibliographic Data, by Fielding H. Garrison, M. D., Lt. Col., Medical Corps, U. S. Army, Surgeon General's Office, Washington, D. C. Third Edition, Revised and Enlarged. Octavo of 942 pages with 257 portraits. W. B. Saunders Company, Philadelphia and London, 1921. Cloth, \$9.00 net.

The third edition of Garrison's History of Medicine is just off the press. The revision has been thorough and represents the best material of the Surgeon-General's Library at Washington. The author was Librarian of the Surgeon General's Library from 1903 to 1913. The world war has been studied from the historical standpoint as closely as the proximity to the events permit. The whole section of the modern period of medicine has been presented in an admirable manner and this section practically takes up half the book. We believe no history of medicine yet published will be so serviceable to the average physician. It is a volume of 984 pages, splendid illustrations, good print, and good paper.



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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.
Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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EDITORIAL

JOURNAL CHANGES

This issue of the Journal comes out in an entirely new dress and is the result of months of careful deliberation on the part of the Council, the Editor-in-Chief, the Associate Editors, and the printers.

Among the new features we call attention to the cover, which may or may not be continued, as it adds nothing to the scientific value of the Journal and is expensive. The type is the same as that used in the Journal of the American Medical Association. The paper is of heavier weight and, therefore, will add something to the appearance of the reading matter, as well as the advertisements.

The Associate Editors were elected by the Council at the special meeting January 9th. These gentlemen have been, without exception, trained in the best medical schools and hospitals and are conversant

with modern medicine to an unusual degree. We have undertaken these special departments with the hope that a much wider range of medical literature may become available to our readers.

A special feature is the signed editorials by distinguished members of the profession on subjects of keen interest at the present time. It is our intention to broaden the scope of these editorials by inviting contributions from able writers in other parts of the country. Several of these will appear in the next issue.

To get out a Journal like this will be much more expensive than has hitherto been the case. The cost of everything entering into the printing business remains almost as high as during the flood tide of prosperity. After careful investigation, the Council was unable to secure any reduction in cost of 1921. The Journal, however, for the past printing, as was hoped for in 1922 over

ten years at least, has been a decided asset financially to the Association, due largely to the loyal support of our advertisers. It is only just, therefore, that our readers recognize this fact by patronizing our advertisers where possible. For nearly ten years the Journal has not admitted to its pages any unethical advertising. We have adhered strictly to the rules of the Council on Pharmacy and Chemistry of the American Medical Association. Our record, therefore, is clean.

If this Journal has anything of merit and is worth a note of comment from our readers, the Chairman of the Council or the Editor-in-Chief will appreciate a card to that effect.

PROVISIONAL PROGRAM ROCK HILL MEETING SOUTH CAROLINA MEDICAL ASSOCIATION, APRIL 18, 19, 20, 1922.

(These papers will be re-arranged before final program.)

Address in Medicine: Dr. Frank Billings, Chicago.

Address in Surgery: Dr. Thomas S. Cullen, Baltimore.

1. Dr. T. H. Dreher, St. Matthews, S. C.: "An Experience with Radium."

2. Dr. G. T. Tyler, Greenville, S. C. Title unannounced.

3. Dr. George H. Bunch, Columbia, S. C.: "Acute Osteomyelitis in Children."

4. Dr. T. Russell Littlejohn, Sumter, S. C.: "Basal Metabolism as an Aid in the Diagnosis of Toxic Goiters."

5. Dr. Sophia Brunson, Sumter, S. C.: "Constipation, Its Cause and Cure."

6. Dr. S. G. Glover, Greenville, S. C.; "Retroperitoneal Sarcoma in Children, with report of a case."

7. Dr. Milton Weinberg, Sumter, S. C.: "Tuberculosis of the Kidney."

8. Dr. W. F. R. Phillips, Charleston, S. C.: Title unannounced.

9. Dr. M. R. Mobley, Florence, S. C.: "Some Anatomical Considerations of the Mastoid Process of the Temporal Bone."

10. Dr. H. M. Smith, Columbia, S. C.; "The Spinal Fluid and Syphilis."

11. Dr. Chas. J. Lemmon, Sumter, S. C.: "The Diagnosis and Treatment of Toxic Goiters."

12. Dr. Wm. P. Cornell, Columbia, S. C.: "Does Adult Tuberculosis Begin in Infancy Always?"

13. Dr. Lindsay Peters, Columbia S. C.: "Electrothermocautery Treatment of Leucorrhea Due to Endocervicitis."

14. Dr. Wm. A. Boyd and Dr. Robt. E. Seibels, Columbia, S. C.: Title unannounced.

15. "Leucocyte Count in the Diagnosis and Prognosis of Appendicitis," Dr. H. W. Rice, Columbia, S. C.

16. Title Unannounced. Dr. D. M. Crosson, Leesville, S. C.

17. "Para-nasal Sinuses, With Especial Reference to Children," Dr. E. W. Carpenter, Greenville, S. C.

MENTAL HYGIENE

At the meeting of the Health Institute recently held in Columbia it was clearly brought out that Mental Hygiene, a phase of medicine hitherto almost ignored by the medical profession, except by those directly concerned with mental diseases, is now coming to the front and is receiving serious consideration not only by the profession, but the laity as well.

For a long time the importance of this subject has been fully recognized by those dealing with mental sickness—the defective and delinquent groups—but their efforts to arouse the public conscience to the importance of the problem did not meet with a very hearty response until it was so clearly shown during the war that Mental Hygiene is one of the most important problems confronting the American people today. This fact has been most forcibly brought to the attention of the profession by Colonel Pierce Bailey, former Chief of the Division of Neurology and Psychiatry in the office of the Surgeon General, who has pointed out that the examination of that vast army of recruits in the last great war showed an astonishingly large number of men suffering from mental and nervous diseases. More than 72,000 young men, most of whom were previously considered strong and healthy, were found to be unfit for military service because of some mental or nervous disorder. Was it, therefore, any wonder that this was found to be one of the largest problems with which the medical division had to deal?

These facts have greatly aided in arousing the interest of many agencies having as their object the betterment of social conditions.

Many State Health Boards have created departments of Mental Hygiene; Mental Hygiene committees have been organized in nearly every part of the country; these and many other agencies are directing their efforts toward the prevention of mental disease and the promotion of mental health. But best of all, the business world is beginning to recognize the economic interest involved in Mental Hygiene which insures the dawning of a new era in this field of medicine. It, therefore, behooves all medical men to acquaint themselves thoroughly with this phase of medicine so that the efforts put forth to solve the problems involved may be under the direction of the medical profession.

C. F. Williams, M. D.

Columbia S. C.

HOSPITAL STANDARDIZATION

The organization last year at Columbia during the meeting of the State Medical Society of the South Carolina Hospital Association makes complete the machinery necessary for an intelligent study of hospital conditions in South Carolina. We now have three organizations whose vital interest in the public welfare demands from each of them an eager willingness to study hospital conditions in our State and to put forth a sustained co-operation effort towards improving the character of service rendered by our hospitals. These three organizations are the Medical Association, the Nurses Association, and the Hospital Association. The membership of the latter association is made up of doctors, nurses, and laymen having official hospital connections. By virtue of their familiarity with conditions in their respective hospitals they should be able to "take stock" of the hospital situation in this State and to map out a reasonable State-wide program of improvement for each year. When such program is mapped out and announced to the doctors and nurses attending the State meeting of their respective associations, one step in carrying out the provisions of the program will have been made, because a desirable publicity will have been secured and the appeal of the uniform, State-wide program of improvement in hospital service coming from the inside will enlist the co-operation of the entire medical and nursing profession. Then, too, by having these three organizations working together—the Hospital Association

serving somewhat in the capacity of an executive committee—the sanction of the medical profession and the endorsement of the nursing profession on a suggested procedure will counter balance one the other. This counterbalancing will work for the good of the patient, who, when he enters a hospital, expects to be not only skilfully treated, but also skilfully nursed.

With these thoughts in mind the Committee on Hospital Standardization last year recommended to the House of Delegates that the Hospital Association be asked to furnish a paper to the Medical Association program embodying a specific program of improvements in the hospitals of the State for the ensuing year. This recommendation was adopted by the House of Delegates and no doubt we will have at the Rock Hill meeting such a program.

J. R. Young, M. D.

Anderson, S. C.

BUNKITIS

Life is so full of bunk that we no longer even protest or attempt to combat it and bunkitis invades every department of human activity, medicine not excepted. Salaried propagandists lead us everywhere and anywhere. Bunkitis may be defined as a sort of Catatonic Schizophrenia due to vitaminized tommy rot or bunk.

Politically dry but personally wet is bunk in politics.

In education football is bunk—the coach is paid more than the president—athletic advertisement not mental cultivation is heralded. In industry unionized labor stifles independence, output and efficiency.

In modern medicine there is lots of bunk; in newspaper advertisements, in propaganda, in standardization, in group diagnosis, in psychiatry, in focal infections, in quarantine, etc., etc.

No reflection is intended on the vast progress in medicine or on the part research workers have played in medical and surgical advances, but most of us know of much that deserves criticism.

One cannot be a perfect doctor until he has been a patient or a perfect surgeon until he has been at the cutting end of the knife.

Men of experience who have been watching the drama of medicine for years have seen hundreds of methods fall into disuse—some

survive, many were bunk to start with.

Those who are true to the fine ethics of the profession should consider the welfare of the patients before their own interests and only advise measures they would have applied to themselves and their families under the same circumstances.

Edward F. Parker, M. D.
Charleston, S. C.

DIFFUSE CATHARTIC PERITONITIS

Although much has been written condemning the promiscuous giving of cathartics in acute abdominal seizures, the practice continues, much to the detriment of the patient and of the operating surgeon. That physiological rest is as much the cardinal principle in the treatment of inflammation of the intestinal tract as of inflammation elsewhere is forgotten in the desire to do something active for the relief of the patient. A cathartic causes increased peristalsis by exciting the muscle of the gut to active contractions. The gut is no longer at rest and nature's chief defence against infection is destroyed. An acutely inflamed appendix or other viscus may in this way perforate that otherwise would not perforate, and when the perforation occurs, because the gut is not at rest, the infection does not remain localized as an abscess but is spread and a diffuse peritonitis results. When we stop to think we all know that this is true, but when we treat the individual case we forget it. If a bowel movement is desired, it may readily be had with an enema that effectually and quickly empties the rectum without exciting the whole intestinal tract. In these cases an enema is as efficacious a therapeutic and a diagnostic agent as a cathartic with none of the dangers of a cathartic. Ochner in the 1920 Year Book of Surgery speaks of "cathartic peritonitis" and makes the astonishing statement that in his experience there has not been a single case of diffuse peritonitis from a perforated appendix in which a cathartic had not been given after the beginning of the attack of appendicitis. Our experience does not absolutely bear out his statement but we are convinced that the giving of cathartics in acute abdominal conditions is productive of much harm and that if the practice were stopped, many lives would be saved in South Carolina every year.

George H. Bunch, M. D.
Columbia, S. C.

PRELIMINARY PROGRAM

Twenty-fourth Annual Session of the Tri-State Medical Association of the Carolinas and Virginia—Headquarters, Monticello Hotel, Norfolk, Va., February 22-23, 1922.

Officers Session 1922.

Dr. W. W. Fennell, Rock Hill, S. C., President.

Dr. J. T. Burrus, High Point, N. C., Vice President.

Dr. H. R. Black, Spartanburg, S. C., Vice President.

Dr. Karl S. Blackwell, Richmond, Va., Vice President.

Dr. Jas. K. Hall, Richmond, Va., Secretary-Treasurer.

"Duodenal Ulcer and Cholecystitis," by Dr. Warren T. Vaughan, Richmond, Va.

"Acute Perforation of Duodenal Ulcer," by Dr. George H. Bunch, Columbia, S. C.

"The Spleen in Surgery," by Dr. Carrington Williams, Richmond, Va.

"The Treatment of Chronic Empyema," by Dr. F. S. Johns, Richmond, Va.

"Repeated Perforations of the Small Intestine of Undetermined Origin," by Dr. S. S. Gale, Roanoke, Va.

"Surgical Research," by Dr. John B. Deaver, Philadelphia, Pa.

"Some Points of Differentiation Between Kidney and Intra-Abdominal Lesions," by Dr. A. J. Crowell, Charlotte, N. C.

"Torsion of the Spermatic Cord; With Gangrene of Testicle. Case Report," by Dr. Hamilton A. McKay, Charlotte, N. C.

"The Differential Diagnosis of Some States of Torpidity," by Dr. Tom A. Williams, Washington, D. C.

"Pertinent Considerations in Hypertension," by Dr. W. W. Silvester, Norfolk, Va.

"The Treatment of High Blood Pressure," by Dr. Garnett Nelson, Richmond, Va.

"Reconstruction Surgery" (Illustrated by Lantern Slides and Moving Pictures), by Dr. F. H. Albee, New York, N. Y. (Invited Guest).

"Therapeutic Impressions," by Dr. Ivan P. Battle, Rocky Mount, N. C.

"Reflections on Medical Ethics," by Dr. Davis Furman, Greenville, S. C.

"Some Further Observations and Reports of Cases in the Instillation Treatment of Enuresis in Childhood," by Dr. William R. Barron, Columbia, S. C.

"Group or Rather Co-operative Practice," by Dr. J. E. Rawls, Suffolk, Va.

"Torsion of Appendicitis Epiplocae—Case Report," by Dr. Samuel Orr Black, Spartanburg, S. C.

"Cancer Propaganda" (Illustrated with Lantern Slides and Moving Pictures), by Dr. J. W. Long, Greensboro, N. C.

"The Course of Recovery Following Operation for Permanent Facial Paralysis" (Lantern Slides), by Dr. C. C. Coleman, Richmond, Va.

"The Surgical Treatment of Facial Neuralgia" (Lantern Slides), by Dr. Addison G. Brenzier, Charlotte, N. C.

"The Relation of Modern Dentistry to the Practice of Medicine" (Lantern Slides), by Dr. Guy R. Harrison, Richmond, Va. (Invited Guest).

"Blood Pressure in Pregnancy," by Dr. J. N. Uphur, Richmond, Va.

"Auto-Transfusion," by Dr. Charles S. White, Washington, D. C.

"Sarcoma of the Long Bones," by Dr. James W. Gibbon, Charlotte, N. C.

"Increasing Use of Narcotic Drugs by Members of the Medical Profession," by Dr. W. C. Ashworth, Glenwood, N. C.

"Psychoanalysis," by Dr. W. A. White, Washington, D. C. (Invited Guest.)

"The Value of Psychoanalysis to the General Practitioner," by Dr. Louis E. Bisch, Asheville, N. C.

"Rambling Remarks in Re Appendicitis," by Dr. Stuart McGuire, Richmond, Va.

"Headache, With Especial Reference to Those Due to Sinus Infection," by Dr. H. C. Shirley, Charlotte, N. C.

"Don't Convict Your Patient on Circumstantial Evidence," by Dr. Lesesne Smith, Spartanburg, S. C.

"Some Disturbances of Pernicious Anaemia Other Than Blood Changes," by Dr. Henry A. Christian, Boston, Mass. (Invited Guest).

"Report and Discussion of Urological Cases (Polycystic Kidney)" (Lantern Slides), by Dr. N. Bruce Edgerton, Columbia, S. C.

"Management of Urological Cases," by Dr. Joseph F. Geisinger, Richmond, Va.

"Uretero-Pyelography" (Lantern Slides), by Dr. Stanley H. Graves and Dr. S. B. Whitlock, Norfolk, Va.

"Neoplasmata of the Clitoris," by Dr. Frank D. Worthington, Charlotte, N. C.

"Nitrous Oxide-Oxygen, Analgesia and Anaesthesia in Obstetrics," by Dr. G. Bently Byrd, Norfolk, Va.

"Tuberculous Joints," by Dr. Alonzo Myers, Charlotte, N. C.

"A Study in Pericarditis," by Dr. W. B. Porter and Dr. F. M. Hodges, Richmond, Va.

"The Value of Early Exploration in Obscure Intra-Abdominal Conditions," by Dr. D. T. Tayloe, Washington, N. C.

"Surgery and the Hemophiliac," by Dr. J. H. Taylor, Columbia, S. C.

"The Tax-Supported Doctors' Propaganda for Socialized Medicine," by Dr. M. Eugene Street, Glendon, N. C.

"A Criticism of the Prohibition Law," by Dr. R. E. Hughes, Laurens, S. C.

"Practical Use of Current Medical Literature," by Dr. M. L. Townsend, Charlotte, N. C.

"The Surgical Significance of Pain in the Left Side of the Abdomen," by Dr. R. L. Pittman, Fayetteville, N. C.

"Silent Stones: Report of Cases," by Dr. W. Lowndes Peple, Richmond, Va.

SINGLE CASE REPORTS

No subject could be of more interest to the profession of South Carolina, or of more importance to its scientific literature than that of case records. It seems to be the opinion of many of our ablest workers, that it requires a series of a hundred or more case records to render a report of any value or interest. Nothing could be farther from the truth. When an investigator begins to look up case reports, he is forced to seek the records of institutions and investigators far removed from our native state. As a rule, this dearth of records is not due to lack of ability nor careful case study, nor facilities for investigation on the part of our native students, but it is due in large part to the mistaken idea as to the value of single case reports.

Therefore, it is of importance that our County Societies, our State Association, and our Journals encourage in every possible way the publication of single case reports, in order that a writer of a book, a paper or one who is called upon to discuss the papers of others can quote and refer to the excellent work being done by his colleagues and associates, among the scientific men of South Carolina.

C. M. Rakestraw, M. D.

Chester, S. C.

ORIGINAL ARTICLES

SOME CASES MET WITH IN AN EYE, EAR, NOSE AND THROAT PRACTICE.*

P. V. MIKELL, M. D., Columbia, S. C.

When Secretary Marsh requested that I read a short, practical paper I thought of the colored pastor, when asked what his text was, said it was taken from "Generation to Revolution."

The physician who does eye, ear, nose and throat work is always confronted with practical conditions; namely, patient may have headaches as a predominant symptom or what not, or he may be referred by the internist to find some focus that is causing a neuritis, nephritis, endocarditis, arterio sclerosis, etc., or patient may come complaining of chronic nasal discharge or chronic aural discharge or some other such symptom. I will say again that the man who does this kind of work is up against every practical condition, so I am going to report some cases met with in an eye, ear, nose and throat practice.

EYE.

CASE 1.—Mr. A. P., age about 50. Complains of severe pain in right eye radiating to right temple. Pain not relieved by large doses of morphine. Marked dimness of vision, intolerance of light for several days. Examination: Visual acuity 20-100, redness of conjunctiva, dilated pupil, glazed cornea, tension feels hard as a marble. Ophthalmoscopic examination shows cupped optic nerve. A typical case of acute Glaucoma. Immediate operation advised. Iridectomy done at once under ether. Patient kept under treatment for ninety days and finally had to have enucleation for relief of pain.

Important fact in these cases is to differentiate from Iritis especially, atropine being indicated in Iritis but is fatal to a Glaucomatous eye. If in doubt as to diagnosis do not use atropine.

CASE 2. John C. L., age 52. December 6th complained of painful right eye, feels as if a foreign body is in the eye. Photophobia, reddened conjunctiva, etc. Examination: Pin point pupil, discoloration of iris, tension normal. Diagnosis: Acute Iritis. Atropine indicated and used. Focus of infection causing this condition is probably badly infected tonsils.

CASE 3. John Davis, colored, came to see me about two weeks after being shot in both eyes with bird shot. One shot perforated right eye at the cornea-scleral junction through the ciliary body. He was lead into my office and could not tell day light from darkness. Examination: No light perception in right eye at all and only a small perception in left eye. No fundus of either eye could be seen with the ophthalmoscope. Diagnosis: Complete loss of vision of right eye with a probable beginning sympathetic involvement in the left eye. Patient was advised to have enucleation of right eye in order to try to save the vision of the left. A gambler's chance. He consented. We removed the right eye and the left has cleared so that in three months his vision is 20-30, a very gratifying result.

CASE 4. Mrs. W., age 35, complains of intense headaches, especially over eyes and occiput, and gastric disturbances. Had taken a long rest cure in one of the best Southern hospitals without relief of headaches. Eye examination by internist. No refraction done. Atropine was instilled, a thorough examination made, large amount of far-sighted astigmatism corrected and her headaches have entirely disappeared.

In this case it would have been impossible

*Read before the Second District Medical Association, Edgefield, S. C., January 25, 1922.

to have corrected this trouble without relaxing the accommodation with atropine. In children and those under 40, it is impossible to correct eye strain without the use of atropine.

NOSE. . .

In nasal conditions the disturbances are mostly due to influenza causing most of the acute sinus conditions, diphtheria or syphilis.

CASE 1. The following case is of extreme interest to me. I quote from a letter received from the patient's physician, "I am sending a small boy patient to you today for examination of his nose and throat, as he is evidently suffering from some infection, and if you do not find sufficient trouble in his nasal tract to produce the symptoms I think it would be well to have him take the tuberculin test and see if he reacts. You will find inguinal, axillary and cervical glands enlarged and more or less tender and this fact may suggest the necessity of Wassermann test. He has run an irregular temperature for several months and just came into my care a few days ago." H. S., age 8. Examination: Tonsils and adenoids removed about nine months before to cure an irregular fever with no relief. Nostrils—right, clear; left, blocked with white membrane. Clinical diagnosis: Nasal Diphtheria. First culture from nose negative. second positive for diphtheria. September 14th, three days later, advised physician to give 20,000 units of antitoxin. Temperature practically normal in three days and nasal condition improved rapidly. Cultures negative after ten days. Child improved rapidly and was completely restored to health.

In my opinion there are many such cases being treated for irregular fevers, when if a nasal culture was made would be positive for diphtheria.

CASE. Mrs. B., brought to my office her physician complaining of a whistling through her nose, with a history of severe nose bleed. In order to control same, physician had put ice in the nostril and com-

pressed the same. Patient had been married five years. Several miscarriages No children. Examination: Perforation of septum about the size of a dime. Wassermann three plus.

CASE 3. Mr. L. L. L., age 27, complains of nasal "catarrh" in aggravated form. Examination: Tonsils and adenoids removed. Much postnasal discharge, pharyngitis marked, deflected septum marked to left, pus in left middle fossa. Transillumination showed dark over left antrum. Teeth looked normal. Irrigation antrum through nose, much foul smelling pus. Diagnosis: Infected Antrum. Irrigation continued daily for a week with no improvement. Radiograph revealed apical abscesses of teeth and one tooth root extending up left antrum. Extraction of offending teeth and two irrigations through tooth socket and patient cured. He needs his septum straightened.

Dr. Skillern in his splendid book, "Accessory Sinuses of Nose," says at least 20 per cent of cases of Arthritis are caused by dental infection, but in my limited experience it has been very much greater.

THROAT

CASE 1. April 3, 1921, Mr. C. V. S. had a very painful throat and gums tender and bleeding, also difficulty in swallowing. Ulceration on both tonsils, spongy and bleeding gums. Smears from throat showed spirilla of Vincent's Angina present. Applications of pure tincture of iodine, and intravenous administration of Salvarsan by Dr. W. R. Barron cleared him up very rapidly. Mrs. S. developed the same condition and was relieved by iodine applied locally.

CASE 2. Miss B., student at Chicora College, May 16, 1921, called to see young lady ill in bed for two or three days, temperature ranging around 103. Examination revealed tonsils and uvula covered with leathery, pultaceous, foul smelling membrane. Immediate clinical diagnosis of diphtheria made. After giving 17,000 units of antitoxin out of a 20,000 units tube, patient informed me.

much to my astonishment, that she had had antitoxin five years previous for diphtheria. The next morning there was no improvement in the membrane or her general condition. Culture for diphtheria was negative. Smear made for Vincient's Angins which was positive. Patient commenced to improve at once after Salvarsan was administered by Dr. Allison, and local applications of iodine. On June 6th I successfully removed her tonsils under local anesthesia.

CASE 3. Mr. L. P. G., in 1918, had tonsilitis of three weeks duration. February, 1919, had another attack. Advised removal. February to May 3rd had a very large tonsil which was very painful and which would not discharge pus upon lancing or upon suction. Man was becoming septic. W. B. C. 16,000. Losing weight. May 3rd operated in face of discouraging advice and had to take out tonsils piecemeal. There was much cheesy pus behind the capsule. Patient began to improve immediately and ten days later was able to go to work. One year later he had gained thirty-five pounds.

I have done eight cases like the one reported and see no reason why I should not do more when necessary.

CASE 4. Miss B., student, Chicora College. Was called to see patient on account of a right facial paralysis. Attending physician had had X-ray taken of both mastoids with a negative result. This young lady had been advised one year previous by me to have tonsilectomy done on account of infection. I again advised this operation to be done at once and in three weeks she was completely restored.

CASE 5. Mrs. C. Right facial paralysis. Patients had had same for several weeks and had suffered many things of many physicians. Ears O. K. Mastoids normal. Tonsils and adenoids normal. Pyorrhea marked, with many apical abscesses showing in the radiogram. Thorough dental surgery cleared her facial paralysis up after three months.

EAR.

CASE 1. Helen B., age 22 months. Was taken with "flu"—ear discharged freely after spontaneous rupture. Asked by physician to see child. Foul smelling discharge, no apparent tenderness, no fever. Cleansing treatment. In a week apparently O. K. Case came to office. Canal O. K. Drum healed and practically normal. Week later called by physician, child having fever 103, cross and restless, and could not sleep at night. Drum still O. K., and also canal. X-ray showed some cloudiness. Blood count 23,000 W. B. C. Differential practically normal. Mother said child would be playing and suddenly would lie down on sidewalk and deliberately strike her head upon pavement. When in mother's arms it would throw its head back violently in her arms as if in pain.

The case was explained to parents and exploratory operation advised and accepted. Results: Completely broken down cells. Temperature persisted three days and then left. Child made uneventful recovery in fifteen days.

It is a fact that in practically all cases of acute Otitis Media Purulent one has to deal with an inflamed mastoid, but that does not mean by any stretch of the imagination that every A. M. P. A. should have the mastoid drained. In fact, a very small proportion of acute otitis should develop operative mastoiditis. In the New Orleans Eye, Ear, Nose and Throat Hospital they average not over fifteen in a whole year.

The diagnosis hinges upon a few cardinal symptoms:

1.—Otitis Media Purulent History—generally discharging ear for seven to thirty days.

2.—Pain over tip, or specially over Antrum subjective or upon pressure, specially at night. Sleeplessness usually marked.

3.—Bulging of post-superior wall of canal which is pathognomonic.

4.—Leucocyte count—straight and differential.

5.—X-ray finding corroborating.

6.—Fever may be absent.

VESSICAL DIVERTICULÆ, WITH REPORT OF A CASE *

WM. E. BARRON, M. D., Columbia, S. C.

Diverticulæ of the urinary bladder are either congenital or acquired.

The acquired diverticulæ are of minor importance, usually following strictures and prostatism.

Most authorities agree that all true diverticulæ are congenital. Fisher's theory, "that diverticula are produced by a folding in of the bladder wall because of excess of embryonic tissue which has to accommodate itself with a certain space in the pelvis;" seems most plausible.

The walls of the diverticula are the same as those of the bladder, but because of the thinness of the muscular coat, it is soon obliterated beyond recognition. The opening of a diverticula is usually in trigone, lateral to or behind the ureteral opening through the ureter sometimes opens into a diverticula. The openings of the diverticula are sometimes large enough to admit the cystoscope; stones or even tumors may be found in the cavity of the diverticula. This case whose cystogram is here presented, had quite a large orifice in the diverticulum, but the inflammatory changes about the orifice and the whole trigone were so marked, that I feared for quite thirty minutes that I would fail of making a diagnosis.

Diverticulæ seem more prevalent in men than in women. Statistics by Fisher, Cabot and Lower show, in a total of sixty-four cases, fifty-nine in men and five in women. There are practically no subjective symptoms in uninflamed diverticulæ. However, the objective symptoms of a "disappearing tumor" in the lower abdomen should make us suspicious of a diverticula in the bladder. Later, depending upon the amount of inflammation, the symptoms are those of retention and persistent infection; these symptoms require cystoscopy and other aids for

the establishment of a correct diagnosis. The diagnosis is fairly easy through the cystoscope, but should be confirmed by the X-ray catheter and cystogram, as demonstrated in the X-ray plates before you.

The treatment is entirely operative. When complicated by obstructive prostate, this should first be removed, and if the symptoms should still persist, then a secondary operation for the complete removal of the diverticulum is necessary. There have been several surgical procedures recommended, but time will not permit me to describe them or discuss their comparative merits. The best of these operations, in my opinion, is that recommended in a recent paper by Dr. J. T. Geraghty which appeared in the January number, 1922, of the Journal of the Southern Medical Association. This operation is done from within the bladder, which, in brief, consists in separating by blunt dissection of the inner or mucosa layer from the outer or fibrous layer, and then, with proper drainage, the sac obliterates itself.

MEDICINE A THIRD OF A CENTURY AGO *

R. B. FURMAN, M. D., Sumter, S. C.

It is stated that the oldest extant sentiment indited by the hand of man, found engraved on stone in ancient Chaldean characters is this: "The good old days are gone forever." And this sentiment occurs to each one of us as the realization is borne upon us that the sands of time are passing through our glass, and that the days when the world and we were young together have gone forever from our grasp.

Youth is anticipation; age is retrospection. Youth is sanguine; age, if not exactly exsanguinated, has at least had so many cold douches and hard jolts that its vital fluid must perforce simmer along morose and leisurely. And so looking back to the first

*Read before the Second District Medical Association, Edgefield, S. C., January 25, 1922.

*Read before the Seventh District Medical Association, Sumter, S. C., July 7, 1921.

mileposts of our thirty odd years' discipleship of Aesculapius and his scantily clad daughter of the lamp, we marvel indeed at the changes that have been wrought in our profession—and in us. When we first shouldered the burden that we were to carry during the coming years of our life it was with what Bill Nye called "bounding enthusiasm." We saw diseases falling before us like hay before the sickle of the "hayseed." We were going to make discoveries that would render us famous and cause our names to echo down the medical arcades of the ages. Yet when we look back we cannot somehow recall a single bacillus or ligature or operation or disease that have our honored patronymic. But we have made discoveries—yes, indeed! We have learned that there are two grand types of disease, subjective and objective, and that very often in the former at least the physician's personality is more weighty than medicine. We have learned that our two most valuable coadjutors are Father Time and the *vis medicatrix naturae*.

We call the early patient who came to us for relief from certain harrassing disturbances of his corporal equanimity. We made a careful examination and what we fondly designated as a diagnosis. We delved deep into our available medical literature and dug up what Dr. So-and-So and Dr. So-and-So, the tip-top authorities of the profession, proclaimed as infallible remedies for the ailment in question. We made combinations of these until it really seemed that no honorably minded disease could find an interstice big enough to crawl through. Still that hard hearted recipient of our harrassed efforts brazenly insisted that he was no better. We finally decided that our diagnosis must have a flaw somewhere, or that Drs. So-and-So were not as infallible as they might be, or that our supply house had furnished us with drugs of an inferior quality, or that it was just our infernal luck to hit such a knot in the incipency of our career. In the meantime our disgruntled patient had taken his dark and devious disease

off to another doctor. This other doctor may or may not have been any better able to bring about a cure than we were, but then being older he had an air of superior erudition, and his added experience enabled him to answer embarrassing questions with the open frankness of a Cumæan Sibyl or a Delphian oracle, or some such ancient embodiment of discretion.

From the lofty eminence of 1921 our knowledge of diseases and medicine in 1889 seem very puerile and far away. And we wonder how people ever got well in those days—and then we pause and wonder why so many are still dying. How will it be 30 years hence? Then we of the older set will have heard the stern mandate, "Physician heal thyself," and will have fallen down on the job and the young men of today will be bald and gray, and the aspiring young M. D. of that day will look down from his flying machine on 1921 and wonder how we could have been so poky and ignorant. Doubtless though the inexorable reaper will still be occupied.

Pepper's System of Medicine, issued during the mid '80s, does not contain the term appendicitis. There is a short dissertation on a condition denominated "typhlitis, perityphlitis and paratyphlitis," in which the appendix was mentioned as being involved. The practitioner of those days diagnosed the trouble variously as inflammation of the bowels, bilious colic, idiopathic peritonitis, typhoid fever or any other old thing that might strike his fancy. Malarial fever was a "miasmatic contagious disease," and pages of erudite drivel took up space in our text books in its etiology. And the "poor harmless fly" was regarded as a nuisance of parts but not by any means as the diabolical criminal he has since become. The coal tars were just coming in, being represented by antipyrin and antifebrin, later called acetanilid. Personally I think this the greatest medical discovery of recent times. Diphtheria antitoxin was introduced later, and many and acrimonious were the controversies in the medical journals pro and con the

introduction of horse serum into the human body and its use became established. Then if you wished to do a vaccination you had to buy a scab or borrow one from somebody who had "took" recently.

Every doctor was his own surgeon in those days, and except in the cases of a few well to do patients who were sent off to hospitals in distant cities, we did our operations mostly in the patients' homes. We had amputating knives with blades about a foot long, and we kept the dressings damp with a carbolic solution to keep the bugs out. We sometimes had carbolic acid poisoning, and always a plenty of what we called "laudable" pus. We didn't lean much to abdominal section, and when some bolder or rasher wielder of the scalpel did dive beneath the crust and get his patient through alive, he awoke to find himself famous.

The telephone and the automobile have worked a wonderful change in the practice of medicine. Thirty years ago the anxious owner of a sick baby put a darkey on a mule and dispatched him for the doctor and resigned himself to hours of waiting. Now if the doctor cannot promise over the phone to be there inside of an hour the call is promptly passed on to some less occupied M. D.

You remember the bitter cold night when some one cylinder hay burner chugged up under your window and emitted a bray that would have drowned out a modern auto horn. You jumped up half awake and were informed that your presence was urgently needed over the sand hills some ten or twelve miles away. You dressed with button scattering haste, trembling with the cold and inwardly anathematizing yourself for ever having considered entering such an exacting profession. You would have given several shares of stock in a diamond mine to get back peacefully in the warm bed you had just quitted. You got down the old-time lantern and went to the stable and wrested out the bay mare. She humped herself and squealed when you threw the cold harness over her back, and every one

of her hairs stood on end from the cold. The buckles refused to respond to the efforts of your half frozen fingers and the mare pretended to be skittish and wanted to go off and leave you. Finally you got her backed up to the two wheeler and were off with a flourish, the wheel spinning and rattling over the frozen ground. Then you struck the sand hills and went toiling through miles of grinding sand. The sky above you looked like a vault of cold steel set with colder diamonds and the icy wind whistled through the black jacks and sent long processions of dead leaves scurrying along the ground and then brought them scurrying back with aimless haste. But there was a certain picturesqueness in all this that outlined the hardship, and you remember as you drove into the dawn how the steely sky changed to luminous blue; how the wind died away and the hoar frost sparkled on every twig and dead blade of grass. Scattered Bob Whites whistled around a branch head, and far up a drove of ducks passed on swiftly moving wings, arousing your sporting instinct. The horse and buggy gave leisure for thought. You could slacken the reins and let your mind pass to other things and places. With the newer kind of motor if you slacken the reins and let your mind wander too far afield you will be brought back again with a jolt—sudden and disastrous. But the doctor's horse has gone forever. Though you may recall with affection this or that faithful servitor of your early days, still you would not hail him back. *Requiescat in pace!*

Of all luxuries professional jealousy is the most expensive and useless. If your one-time patient hies him away to another doctor you may be sure there is some cause. Perhaps he wishes to evade paying you. In that case you are well rid of him. Perhaps you have offended him in some way. Then if you pursue the calm equanimity of your way and refrain from pawing up the earth and bellowing, in nine cases out of ten he will come knocking at your door

again—or some of the other fellow's patients will take his place. Perhaps he thinks the other doctor may be more skillful than you, or for some reason has lost confidence in you. Then thank your stars that he is gone. A dissatisfied or doubting patient is just about the most onerous burden you can bear, and the most powerful weapon for his betterment has been taken out of your hands. And don't harbor grudges against the other doctor and put both him and yourself in a difficult position. Probably he is in no way to blame. Anyhow the world doesn't belong to him—nor to you either. Be careful how you accept what titis or that one reports some other doctor as having said about you of a disparaging nature. Probably it is grossly exaggerated or has no basis of fact. Pay no attention to it unless you get it from the fountain head, and then see that it is well threshed out.

As you take down your dust covered day book of the years long passed and read name after name of your one time patients who have died under your care, you cannot help wondering how many of these may have had their exits accelerated by your well meant but ill advised efforts. This would be a harassing thought were it not that deep within you you feel that your own soul, which after all must be your grand and fine arbiter, will adjudge you innocent in that you have honestly endeavored to avert the impending and postpone the inevitable.

SYPHILIS OF THE UTERUS *

J. C. ŚOSNOWSKI, M. D., Charleston, S. C.

Some years ago while in charge of the gynecological clinic at Shirras' Dispensary in this city, I collected notes on a series of 87 cases, which I had diagnosed as syphilis of the uterus and was waiting till I got 100 cases before reporting them. However, my

service there was ended before I got the data and I never wrote the paper I had planned. I was there from 1905 to 1911. Last winter I took the matter up with Dr. John Clarke of Philadelphia, who said that he would have his clinic take up the study if I would write him a brief resume of my observations. In Philadelphia during October last I was told at his clinic that they were following the matter up and had already found a number of cases—that at the end of the year they would forward me a report of their findings. I desire now to present a brief resume before this society tonight.

The essential pathology of all syphilitic lesions after the primary sore seems to be an endo and periarteritis with cellular proliferations; consequently all organs with a considerable blood supply are apt to show changes due to these vascular disturbances. The lungs, liver, kidneys, stomach, intestines, brain and other vascular structures suffer. Among these the uterus is a very common sufferer.

The syphilitic affections of the uterus are, first, the initial sore seen, not rarely, on the cervix; second, the uterine discharge—leucorrhœa and metrorrhagia seen during the eruptive stage of the disease; third, the engorged or wet uterus seen in the early part of the later phases of the disease; fourth, the contracted or dry uterus seen in the later stages, and, fifth, the periuterine adhesions seen in some cases toward the end of the wet hyperplastic stage.

Of the initial sore the chancre of the cervix, I need say little—nearly every textbook covers this. In this stage there is usually some sero-sanious leucorrhea, often of a peculiar acrid odor. There is frequently some pain in the back and inspection with the speculum shows the cervix large, juicy, ulcerated, with sometimes a diphtheroid looking membrane in the ulcer. The appearance differs but the diagnosis is usually not difficult, especially as it is most apt to appear in young women.

The leucorrhœa of the eruptive stage of

*Read before the Medical Society of South Carolina (Charleston County), November, 1921.

sphilis is apt to be overlooked in most cases, for the patient is more disturbed over the eruption, the fever or the diarrhoea which often accompanies this stage. The discharge is apt to be rather pronounced at this stage, however, and is of varying character—serosanious or sero purulent are the main types. When the eruptive stage passes the discharge is left and persists for some time, and to change in character to a thinner and more glairy discharge. This and the later uterine developments are not at all dependent on the site of the initial sore.

Subsequently to these manifestations the vascular changes appear. Anywhere from six weeks to several months after the secondary symptoms the stage of hyperplasia commences. The uterus gets heavy, large and moist. It sometimes gets to about three times the normal size (estimated) but usually about one and half to twice the normal. The cervix feels soft. The uterus feels equally enlarged, not irregularity as in a myoma. It feels heavy and is apt to be retroflexed and hard to lift back into anti-flexed position. There is nearly always pain in the back and frequently constipation from pressure in the rectum. Sometimes there is painful defecation from pressure on the engorged organ. There is usually increase in the menstrual flow both as to time and quantity. In the interval there is leucorrhœa, usually of a serosanious quality. The uterus is usually moveable but not easily on account of its size and weight. In this stage occasionally, especially toward the latter part of it, there are sometimes cobwebby adhesions between the uterus and the surrounding organs—this is not so in the majority of cases but in those where there is rather an intense uterine congestion.

Gradually this stage subsides—usually in about three months, though the time is not definite and then as round cell infiltration occurs contraction occurs, and we find the uterus getting smaller and smaller until it is reduced to about two-thirds or three-fourths its normal size. With the contraction of the new formed peri vascular tissue

and the obliterating end-arteritis the uterus becomes dry, hard and small. It is usually freely moveable, in a normal antifixated position and seems to give small trouble as a rule. There is sometimes pain in the back of a vague character, but not pronounced, and this is not a constant symptom. There is often a small amount of thin glairy leucorrhœa—often not requiring the wearing of a guard. The vagina usually looks pale and the cervix small and hard. Most of these cases are rather thin and the uterus can be palpitated easily in such cases. The proportion of the wet or hyperplastic to the dry or hypoplastic cases I have observed to be about 1-5.

I have not gone into the accompanying symptoms in other parts of the body nor into the subject of abortions, as I wish to be brief. I will say that in my observations pregnancy was less and less apt to occur as the hypoplastic stage advanced.

THE PENNINGTON OPERATION FOR HEMORRHOIDS *

CHAS. J. LEMMON, M. D., Sumter, S. C.

My excuse for calling your attention to such a simple subject as a hemorrhoid operation is not because I have anything new to offer, or that I think you are not familiar with the subject, but because of the prevalence of the ailment; (1) because, I recently heard a physician who has lately served in three of the largest hospitals in the East say that the results from the hemorrhoidal operations were more unsatisfactory than any other surgical procedure he had witnessed during his service.

There are three methods for operating on hemorrhoids usually described in the standard text books: Allingham's dissection and ligature; Whitehead's radical removal of the pile bearing tissue, and the clamp and the cautery. None of these are satisfactory.

The Pennington method is not all we

*Read before the Seventh District Medical Association, Sumter, S. C., July 7, 1921.

could wish for, but it has many advantages over the methods mentioned. I will now describe the method.

PREPARATION OF THE PATIENT

In preparing the patient for operation, I prefer to give one or one and a half ounces of Epsom salts about eighteen hours before operation. A high S. S. enema about six hours before. The patient is then anaesthetized and held upon the table in the lithotomy position. The anal region is shaved and painted with 50 per cent iodine and glycerine. The operation may be performed under either local or general anaesthesia. I prefer the local unless there are contraindications.

With the patient under, the sphincter is gently and carefully dilated with the fingers or with a Kelly dilator. This usually requires about fifteen minutes. If there is any soiling of the field of operation, the rectum is irrigated with a 1 per cent solution of Lysol. Each anal quadrant is now grasped at the mucocutaneous juncture with a pair of forceps and held by an assistant. By means of the forcept the anus is everted and the internal tumors exposed. You see each hemorrhoid distinctly.

Now seizing with the full hand the forceps attached to the posterior quadrant evert it, which places the mucus membrane covering it on tension. Then with a pair of scissors, curved on the flat, remove an ellipse from the apex of the tumor commensurate with its size. The incision opens the blood lakes and enlarged blood vessels and permits most of the blood in the tumor to escape. Each tumor in regular order is treated in like manner. Spurting vessels, if any, are caught with hæmostats and ligated with plain cat gut. It is surprising to see how few spurting vessels are met with in this open method of operating. If you will pick up and properly ligate all spurters there will be no secondary hemorrhage. All external tumors and tabs of the skin are cut off. Care is taken not to make an incision in the muco-cutaneous junction when it can be avoided, as this is the most sensi-

tive part around the anus. A bi-valved speculum is now introduced and any blood clots that may have accumulated in the rectum are swabbed out. The field is then dressed by means of a rubber covered tampon introduced through the bi-valved speculum. The tampon is constructed with a bulbous enlargement at the distal end which prevents it being pushed into the rectum. Wet gauze is carefully packed around the protruding portion. Over this is placed a cotton pad, held in place with a tight T bandage. The patient is then placed in bed with a hot water bottle to the perineum continuously, which is very often all that is necessary to relieve the pain. Morphine is given if necessary.

By operating in this manner there are no tender or obstructed stumps to slough, nor nerves caught and squeezed, producing excruciating pain, as there are when the ligature method is used. Neither are the nerves and tissues painfully burnt as when the clamp and cautery are used. In lieu of this there is a free and unobstructed outlet through the anus and a fibrinous exudate is deposited over the operative field which exudate is neither destroyed nor disturbed on removing the dressing. Moreover, the danger of stricture is obviated as the normal caliber of the bowel is left practically covered with mucosa and submucosa. Neither is the anal orifice contracted as it frequently is after either of the above operations.

At the end of twenty-four hours the tampon is removed and the patient is given a cathartic. The removal of the tampon is painless. The first bowel movements are painless and there is as a rule very little bleeding. After the bowels have moved the patient is instructed to keep them soft for two or three weeks. Castor oil is the best drug. In making the toilet after a bowel movement, wet cotton or cottonoid is best. This should be used in the same manner as you do a sponge and not with a rubbing motion. Do not allow the patient to use paper or any hard substance as a detergent until the parts are thoroughly healed.

I have used this method of operating on my hemorrhoid cases for the past five years with excellent results in all cases except two. One of these cases had a small ulcer present at the time of operation. Of course there was infection after the operation and a prolonged convalescence. The ultimate result in this case was good. The other case was one with strangulated hemorrhoids. The parts were much swollen and œdematous. In operating this case I must have cut away too much mucosa, besides healing was delayed. The final result was

a slight stricture. The stricture has been relieved by dilatation.

I have given you the two most important contra-indications for hemorrhoidectomy; infection, strangulation. Both conditions should be treated and relieved before radical operation is attempted.

My patients usually leave the hospital after forty-eight hours. They are usually well at the end of a week or ten days. They suffer less pain, their convalescence is shorter, their bowels move daily.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

RADIUM VERSUS SURGERY FOR FIBROIDS

The surgeons and gynecologists are realizing more and more the potency of radium as regards the cure of fibroid tumors of the uterus.

Radium cures fibroids. It causes the tumor itself to disappear or decrease in size, and the symptoms to subside.

It should only be used in non-complicated cases, e. g., in cases of fibroids in which there is no inflammatory pathology in the tubes or ovaries.

There is no danger from radium in the treatment of this condition by experienced radiologists when the proper technique is aseptically executed.

Tumors as large as a three or four months pregnancy may be safely treated, but when the mass extends to the umbilicus or fills the entire lower abdomen, much radium is required for a shorter time or less radium is required for a longer time, and from the enormous destruction of cells which must

necessarily occur, there will be considerable absorption with the possibility of toxemia resulting.

Everyone must realize that when a woman learns that radium will remove her tumor, and cause her hemorrhages to cease, without the attending dangers and ever present possibilities of complications, which go with every operation, no matter by whom performed, she will surely choose it in preference to surgery.

Radium does away with post operative nausea and vomiting, infections of the abdominal wall, post operative hernia, post operative pneumonia, post operative peritonitis, post operative intestinal obstruction, phlebitis, so-called milk leg, and other things which occasionally follow surgical interference.

The writer has yet to see the first woman who prefers surgery to radium for the cure of an ordinary moderate size fibroid tumor of the uterus, when the advantages and disadvantages of each method of procedure have been clearly stated.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
Superintendent State Training School,
Clinton, S. C.

The Associate Editor who has been selected to introduce this department into our Journal comes to his new task with a profound sense of his inability to treat the subject in a manner commensurate with its importance, but nevertheless with a determination to nerve himself up to the periodical struggle of endeavoring to offer a contribution that shall be worthy of printer's ink, and help to atone for the mistake made by the Council in its selection.

It is not necessary for the general practitioner to give much thought to the study of nervous and mental diseases except as a side line, but it is a subject which no physician can well afford to disregard entirely. More and more recognition is being given to the nervous condition of any person in its bearing on his general health, and to the power of suggestion in the treatment of any disease. The importance of psycho-therapeutics as in aid of the treatment of disease was first brought to our attention by the practices of charlatans and mystics, and yet it has always been practiced, more or less unconsciously, by any physician who tries by his cheerful manner to divert his patient's attention from his sufferings and to buoy up the courage of the nurses and friends. The physician who requested the patient to read the newspaper to him each day while he was dressing an infected finger, on the ground that he had no time for reading, was practicing psychotherapy no less truly than does the so-called Christian Science practitioner. The words of the Great Physician, "Thy faith hath saved thee", were no mere figures of speech, since we all depend to some extent in our successful treatment of any disease, upon the confidence which we can inspire in our patients.

Many persons, especially of the older generation, would be deeply offended if we should tell them frankly that they are exaggerating the disorder by paying too much attention to it. Many of our patients are so sure that they require medicine that we could not refuse to prescribe it without driving them to the use of patent medicines and nostrums. But others come to us with a genuine desire to learn how to take proper care of their health; and if we habitually turn them away with a mere prescription, on the ground that nothing else will satisfy them, they may resort to the study of some system of mental therapeutics based on false metaphysics. It is simply for us to study each patient mentally as well as physically, and to decide what means will be most helpful in effecting his recovery or improvement. Especially in dealing with young people and children, we should try as far as possible to teach them that it is in their power to a considerable extent to decide whether they shall be nervous invalids or healthy and efficient workers.

A well developed case of chronic neurasthenia is about as difficult to cure as almost any organic disease, and yet it is easily possible that some of the most hopeless of such cases might have been prevented if their development had been checked in the early stages. Many young girls, spoiled by indulgent mothers, have been allowed to grow up with the idea that a certain pleasing distinction attaches to being considered "nervous," and have learned thereby that many unpleasant tasks can be escaped by means of a convenient headache. It is for us to point out to the mothers the danger of placing a premium on invalidism, and it is our privilege to teach these high-strung children to find their compensation for their

sufferings not in the sympathy which they receive, but in the power that comes with learning to bear pain uncomplainingly. Children respond readily to suggestion, if it be carefully and wisely given. As the boy of four may be taught to laugh instead of crying when he falls down, so the girl of fourteen may be trained to make light of minor ailments, and to take pride in performing her daily tasks even though some of them may be done with an ache. There is, of course, a natural limit to the wisdom

and effectiveness of such treatment; but it may be fairly claimed that the hosts of nervous invalids, who frequent health resorts or who terrorize families by exacting demands for care and sympathy, are not recruited from children who have been carefully taught how to live. We are just rambling about trying to point out a few of the attributes of this department at this time. We shall endeavor to speak from a text next time.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

We take this occasion to make our editorial bow to the readers of the South Carolina Medical Journal.

In this column each month, we shall endeavor to discuss the various phases of Preventive Medicine, and to keep our readers informed regarding the newer developments of Modern Public Health.

A great deal of real constructive public health work has been accomplished in South Carolina, and a great deal more is going on at present; and it shall be our endeavor as far as practical, to inform our readers concerning the progress of such work.

The most casual observer can not fail to note the rapid strides that have been made in the field of preventive Medicine during the past few years; and the keen interest displayed by the general public in all matters relating to public health must be taken as an indication of the growth and development of this important branch of medicine.

The statement that public health is purchasable by money and effort, and that within natural limitations a community can fix its own death rate, has been established in numerous instances; and each successful demonstration of this kind has stimulated health authorities to further develop

their opportunities and to assume greater responsibilities.

So rapid has been the development of Preventive Medicine, and so numerous have been the discoveries concerning disease prevention, that a great many of the leading Medical Colleges are offering courses in this science; and the modern public health worker is a trained specialist as much a specialist as the Surgeon, the Laryngologist or the Roentgenologist.

In view of the popular interest in Public Health, the laity has become well informed regarding the many phases of this work, and it is not at all unusual for a layman to become interested in some phase of public health, and learn as much about certain phases of the work as the average well informed physician.

The average practitioner, therefore, is apt to find himself less informed as regards certain public health work, than some laymen; especially is this true as regards the developments that have been announced during the past few years.

A monthly column such as this is contemplated, to be, therefore, should fill a long felt need for the busy practitioner, who has neither the time or the facilities to keep up with the rapidly changing progress of this new specialty.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
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Charleston, S. C.

GRANULOMA INGUINALE

Granuloma Inguinale is a disease which we have very recently discovered to be prevalent in this country. It has been known that occasionally a case would appear here, another there. Now, however, Granuloma appears to be plentiful in South Carolina and probably also throughout the entire Southeast.

It is essentially a very chronic, long lasting, granulomatous, superficial, skin lesion which involves the genitals, the inguinal and perineal regions, and, more rearely, other parts of the body. Because of its chronicity, it may give rise to marked anemia and a general depletion of the physical strength. Apparently no general symptoms resulted from it until the area involved is secondarily infected with saphrophytic organisms, at which time there is sometimes evidence of absorption of toxic material produced by these organisms. The disease is frequently found associated with other diseases, notably Syphilis.

The causative agent in Granuloma Inguinale is said to be Donovan's organism although this has not been conclusively proven. The organism is found in smears from infected areas, within and without the cells. They can readily be cultivated on artificial media and can be successfully inoculated into some of the smaller laboratory animals in which a fairly typical lesion is produced.

Very effective treatment of Granuloma has been secured through the use of a 1 pc. solution of Tartar Emetic (Antimony and Potassium Tartrate) intravenously.

The chemically pure preparation is to be used. Small doses are administered in the beginning and as time advances the dosage may be increased to tremendous quantities. This treatment, if persisted in, will effect a cure. The association of other diseases, particularly Syphilis, renders the treatment much more difficult. In those cases in which Syphilis is present, the best results are obtained by actively treating both diseases at the same time.

Granuloma Inguinale is a disease which invites investigation. Much has been done toward the correct diagnosis and treatment, but nothing is known of the mode of transmission or infection and nothing of the prophylaxis. It seems to be particularly a disease of the lower classes of society, and its victims are indeed pitiful patients. Their patience wears away under the strain of an ever increasing zone of disease, their physical strength dwindles and they finally reach the stage of physical debility and utter hopelessness. After some treatment, their attitude changes and the hope of cure renders them willing and obedient, even though they realize that the end to be attained is far away and the treatment tedious and time consuming.

EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

MAXILLARY SINUSITIS.

Infection of the nasal accessory sinuses, both acute and chronic have become very important and far-reaching in their relationship to the every-day practice of medicine. The maxillary sinus on account of its peculiar anatomical construction and its close proximity to the teeth makes it the most frequent offender. The dental profession has been aroused from its lethargy and most active in the recognition of pathology in the antrum of Highmore.

The prevalence of infection has become very high during the last two years, due in part, most likely, to the great epidemic of influenza, and the two or three succeeding milder epidemics which predisposed to infection of the nasal accessory sinuses. Another great cause for the increase in the recognition of infected nasal sinuses, is to be found in the education of the laity as to the desirability of a general physical examination. During the course of this examination the patient usually passes through the hands of a nose and throat man who should not consider his work complete without at least a thorough transillumination of the sinuses confirmed by an X-ray picture. Then, too, there is the increasing knowledge of the medical and dental professions at large of the ever-present possibility of the existence of foci of infection and the great benefit to be derived by the patient from prompt detection and removal. This I believe to be the great incentive governing physicians and dentists in their desire to ferret out the underlying cause in working out a diagnosis in obscure cases of so-called

rheumatism, organic heart disease, neuritis, chronic bronchitis, and various other systemic infections.

It is not always easy to diagnose a case of maxillary sinusitis. The easy cases are those which come to us with both nostrils filled with pus. The class of cases which very often tax our ability in diagnoses are those which come to us in the chronic stage of infection, the acute infection having taken place months or years before without detection. At the time of our rhinoscopic examination we are very often unable to detect any free pus in the nose, but there is present a heavy viscid mucous in the middle meatus which finds its way into the post nasal-space and can be seen in the form of strings or bands on posterior nasopharyngeal wall. Upon trans-illumination we shall get a slight diminution in the illumination on the affected side and the pupil of the corresponding side will be dark. This is at once suggestive of pathology within the antrum and should be confirmed by the X-ray. I do not attach any importance, whatever, to the trocar and irrigation as a diagnostic measure. If we have pus in the antrum we know it, possibly, by other means of diagnosis, and since the puncture and irrigation can only confirm what we already know, why use it. On the other hand, if the antrum is without pus but filled with diseased mucous membrane and masses of granulating tissue our irrigation will be returned practically clear and we have gained nothing. Transillumination and X-ray, then, must be our main reliance in the diagnosis of these obscure cases of maxillary sinusitis.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Modern urology is practically a science. It rests upon the foundation of four, more or less, reliable rocks:- the microscope, cystoscope, chemistry and the Roentgen ray. These four approaches to urological work will enable us to diagnose the vast majority of lesions of the gento-urinary tract with absolute certainty, and treat them intelligently. These aids are sometimes used singly, but very frequently collectively.

It is seldom we can depend only on subjective symptoms for a correct diagnosis of urological conditions. Frequently, when symptoms do occur, they are not referred to the genito-urinary tract. They are seldom pathognomic. For example, paroxysms of renal pain may be due to calculus, stricture of the ureter, pyelitis, pyonephrosis, renal or uteral tumor causing obstruction from a blood clot, vesical tumor at the ureteral orifice, twist of the ureter with hydronephrosis, etc. Often, symptoms are absent even in the presence of extensive lesions. Even the presence or absence of fever, positive or negative findings of pus cells and red blood cells, apparently positive or negative x-ray findings, presence or absence of tenderness or swelling, may not permit a correct diagnosis without cystoscopy with ureteral catheterization and all the other aids in diagnosis at our disposal.

The microscope will show the presence of pus cells, red blood cells, epithelial cells from every portion of the tract, casts of various kinds, crystals, and organisms, such as the tubercle bacillus, etc.

The cystoscope with its many accessories is undoubtedly the most valuable single aid that we have for diagnosis and

treatment of lesions of the upper urinary tract. Prostatic obstruction, vesical, ureteral, and renal stone; vesical ureteral and renal neoplasm, tuberculosis of the kidney, hydronephrosis, and many other conditions can be diagnosed with the cystoscope, some times alone, frequently in combination with the microscope and x-ray. Pyelograms, ureterograms, and cystograms have a distinct diagnostic value.

Chemistry is one of the oldest sciences and a very important one. Blood chemistry now in the diagnosis and treatment of urological lesions is often indispensable. In surgery, and as a prognostic aid, it is invaluable. The tests for the estimation of renal function are very important.

The Roentgen ray alone can not be relied upon for the diagnosis of lesions of the urinary tract. It is a mistake that is frequently made to rule out calculus by a negative X-ray finding. When shadows, suggestive of stone, are seen, ureteral catheterization and urography are necessary to verify them as they may be found to be calcified lymph glands, or gall-stones, etc.

In urological surgery, especially of the kidney, ureter, bladder, and prostate, the armamentarium of the urologist is necessary because preliminary and post-operative treatment must often be instituted. For example, a patient has a calculus of the renal pelvis with infection. The patient's condition can often be improved for pyelotomy by preliminary treatment with pelvic lavages. After the operation, it may be necessary to finally cure the infected kidney by further treatment through the ureteral catheter.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

It shall be the aim of this department to publish short articles dealing with practical Pediatric questions of help to the general practitioner. We will welcome any criticism upon which we can improve the department, and hope that any physician will feel free to and will ask questions relating to any Pediatric topic upon which he may wish statistical data or information. Answers to the same will be published in the succeeding Journal or as soon thereafter as possible.

SOME POINTS ABOUT ANTITOXIN IN DIPHTHERIA

Fleischner and Shaw, in Archives of Pediatrics for October, 1921, write an article, *The Specific Treatment of Diphtheria*, from which the following points are gleaned:

Death occurs from the combining (fixing) of the toxin with the tissue cells, and from asphyxia through mechanical obstruction.

Toxin enters the blood as formed in the throat or nose, and in very few hours after the toxin has left the blood and become fixed to the tissue cells, antitoxin has great difficulty in reaching it and large quantities are needed for neutralization, if such is possible.

The toxin leaves the blood and combines with the tissues very rapidly so that antitoxin, which must get into the blood before it gets to the tissues, must be gotten into the blood very early to be effectual in preventing tissue fixation.

Park, through the use of the Schick test, has shown that when toxin has acted on the tissues for twenty-four hours 10,000 units given by the intramuscular or subcutaneous routes are powerless to prevent a Schick reaction, and that 10,000 units given intravenously have only a very little effect.

When the toxin has acted six hours 1,000

units given intravenously will prevent fixation with the tissues, but if given intramuscularly or subcutaneously fixation is not prevented. The 20,000 units are needed subcutaneously to prevent fixation.

Park shows also that antitoxin passes into the tissue fluids from the blood ten times as fast when given intravenously as when given subcutaneously, and four times as fast as when given intramuscularly.

Again, when antitoxin is given subcutaneously it takes twenty-four hours for the major part to be absorbed into the blood stream and twelve hours when it is injected intramuscularly. The rapid subsidence of the swelling at the point of injection is due to the water of the serum being absorbed, the colloid portions being taken up much more slowly.

The hope of preventing the sudden late deaths and the post-diphtheritic paralyses, which follow the apparent recoveries after the use of antitoxin by the subcutaneous route, warrants the intravenous method of administration in spite of the few occasional bad results following its use. These bad results can be avoided, in those children who have had asthma, eczema, urticaria, or previous doses of serum, if they are desensitized by half-hourly progressive doses of the antitoxin intravenously, starting with one-hundredth C. C. and in a half hour one-tenth C. C., the next half hour one C. C. and in one-half hour, provided no reaction has been noted, the full dose.

One full dose given early is the best practice. A second dose is acknowledgement that the first dose was not big enough to neutralize both blood toxin and tissue toxin and, as the blood toxin has the first chance at the antitoxin, the tissue toxins, which are the most important to reach, are left to work

their harm. Too much antitoxin is much safer than too little.

In giving intravenous injections follow three simple rules:

1. Warm the antitoxin to a temperature of 99 degrees.
2. Inject it slowly, not faster than one C. C. per minute.
3. Endeavor to give a preparation that is absolutely clear.

Duration of the disease and clinical severity are the best guides as to whether a large or a small dose shall be given.

Under two years—Early mild cases, 3,000 units; early severe, late mild, 5,000 units; malignant cases, 10,000 units.

Older children—Early mild cases, 5,000 units; early severe, late mild, 10,000 units; malignant cases, 15,000 units.

The above single intravenous doses are sufficient if given early. If the intravenous method cannot be used, from twice the amount in the mild cases to four times the amount in the severe cases should be given in a single injection by the intramuscular route.

The subcutaneous method should never be used in the treatment of diphtheria. Its use is a distinct menace. It should be employed only to immunize exposed children.

Mild and early cases should be kept in bed two weeks, and severe and late cases should be kept in bed four to eight weeks, depending on the heart muscle and any evidences of nerve involvement, as shown by eye and palate involvement (paralysis)

Loss of knee jerks means fixation of toxin to nerve cells.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

DEEP X-RAY THERAPY

A great deal has appeared in both the scientific and lay press in the last two years about deep X-ray therapy, and a great deal of honor has been bestowed upon the Germans for their advanced thought and activities, when as a matter of fact the American investigators who visited German clinics brought back to us the consoling news that there were no machines in Germany that were any more powerful than the machines in use in America. The differences between the German and the American procedures was one of measurement; the Germans use the peak voltage as their criterion and the Americans use the sustained gap.

However, the statement that the Germans were using a much more powerful apparatus than the American stimulated in the minds of American manufacturers the desire to produce the most powerful X-ray machine in the world and it is believed that this has been accomplished. Machines have now been produced that will deliver 280,000 volts—almost three times the output of our present machines. But at the present writing experimentation with this tremendous

amount of energy has not changed our technique very much, and probably will not have a very beneficial effect for several years. The use of 280,000 volts of current through a specially prepared tube and through an immense amount of filter present an entirely new situation, and one that will require years of scientific work in order to produce the expected result without great danger not only to the patient but to the fine record of achievement that deep X-ray therapy has labored so long to build.

For instance in America we know that in case of carcinoma of the cervix a pan-hysterectomy that is preceded and followed by deep X-ray irradiation is infinitely more apt to prove curative than one in which this great prophylactic measure is omitted. With an early diagnosis, pre-operative irradiation, complete pan-hysterectomy and post-operative irradiation the mortality in cancer of the cervix can be tremendously reduced. And it should be considered by the profession as a crime of omission not to examine promptly the woman above thirty who has shown the slightest menstrual irregularity, keeping the possibility of cancer of the generative organs in mind.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

Creeping Disease, by Prof. Tamura, Japan; British Journal Dermatology, March and April 1921.

Prof. Tamura in a very complete article describes a case of creeping disease in which he was able to recover the parasite causing the disease. He gives comprehensive study of the parasite, a pathological study of the tunnel made in the skin, and a complete review of the literature on the subject.

He concludes that creeping disease is a skin affection in which an erythematous papular or vesicular line appears on the surface of the skin and extends day by day; in some instances traveling as much as four inches in twenty-four hours. In most cases the line takes a serpiginous course, and always accompanied by itching and pain while the parasite is traveling. Of all the cases reported, which number less than forty, in nine only has the causative parasite been found. Three kinds of parasites have been found and studied, *Gastrophilus*, *Gnathostoma*, and *Hypoderma Vobis*. All the parasites have a ring of hooks on the body and the points of these hooks are turned to the tail so that they cannot go backward when

creeping through the skin. Prof. Tamura predicts that new parasites will be found in this disease in the future possessed of similar lines of hooks and that the subjective signs will depend on their size.

This article is of peculiar interest to me since during the past four months I have studied three cases which have had definite symptoms that point to creeping disease. So far I have been unable to demonstrate a causative parasite. However, I am convinced that this so-called creeping disease is not uncommon in South Carolina. My three cases have all been in children. The eruption consisting of a line of vesicles serpiginous in character traveling in one instance three inches in twenty-four hours and accompanied by considerable itching and pain. The vesicular track was laid open and a search made for the parasite and then the whole area painted with iodine. The condition was arrested at that point only to break out at another place three weeks later. Naturally I am unable to say whether the second eruption was in any way associated with the first.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

FACTORS OF PROGNOSTIC SIGNIFICANCE IN PERSISTENT HIGH BLOOD-PRESSURE.

(Piersol Med. Clinics of N. America, 1921, Nov., p. 705.)

A series of 160 cases with a persistent vascular hypertension of 170 millimeters of mercury or over is presented. Each case having been observed from two to ten years. "This material has been studied with a view to determining what the duration of life has been after the high blood-pressure has been recognized, if death occurred, what has actually been its cause and whether the ultimate prognosis bore any discoverable relationship to the height of the pressure or to its etiology."

The conclusions reached are as follows:

"1. Chronic renal disease is chiefly responsible for hypertension in men, whereas in women hypertension is more often the result of some primary vascular disturbance. The frequent occurrence of climateric hy-

pertension largely accounts for this difference.

"2. In cases of persistent hypertension the etiology of the high blood-pressure bears a definite relationship to the prognosis. The mortality is greatest in those cases of hypertension that are due to chronic nephritis. Menopausal hypertension is conspicuously benign.

"3. About 28 per cent of the chronic nephritics that exhibit marked high blood-pressure succumb within three years of the time they come under observation.

"4. The chief causes of death in cases of high blood-pressure are cardiac failure and cerebral hemorrhage.

"5. After the age of forty the percentage of mortality in patients with hypertension increases with each decade.

"6. The height of the blood-pressure, per se, whether the systolic or the diastolic pressure is considered, bears no definite relationship to prognosis. The most important factor in determining the prognosis is the underlying causes of the high blood pressure."

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

EXAMINATIONS OF OBSTETRICAL PATIENTS

A valuable contribution to the safety of obstetrical patients was made when we became convinced that frequent vaginal examinations during labor not only gave but little information but also, through possible infection, were a source of serious danger to the patient. Few men advocate or practise frequent examinations during labor at present, one careful palpation by vagina gives the important features and after that the majority of confinements can be concluded without another.

The obstetrician should make certain routine examinations before and after delivery in all cases. Ante-partum examinations include a careful and complete physical at the first visit. Every three weeks thereafter he should measure and record the blood pressure, and do a urinalysis. At least every six weeks examine the abdomen to determine the height of the fundus, the condition of the fetus and its position, and

record the findings. False pregnancy, tumors and ectopic gestation, can thus be diagnosed before a time when their discovery might be embarrassing.

Finally a most important examination is the final when the patient is to be discharged. Parenthetically, it may be said that a definite understanding as to when the care of the mother and child ceases to be included in the fee, is the source of much satisfaction to all parties. At this final, examine the condition of the nipples, abdominal musculature, the position, involution and mobility of the uterus, the condition of the cervix, vaginal walls and perineum, the presence of hemorrhoids or of varicose veins, and give appropriate advice as to exercise, activity, and feedings.

Obstetrics is said to be the most poorly paid branch of medicine: this may be due to the fact that many physicians render no services other than to "wait on" their patients at confinement, and the patient feels that the small fee is full compensation for what she receives.

SOCIETY REPORTS

PROGRAM FOR SECOND DISTRICT MEDICAL ASSOCIATION OF S. C., HELD AT EDGEFIELD, JAN. 25, 1922

At 10 o'clock a. m. In the absence of the President, Dr. J. K. Fairey, the meeting was presided over by Dr. S. E. Harmon, Dr. R. A. Marsh of Edgefield acting as Secretary.

Prayer—Rev. G. W. M. Taylor.

Address of Welcome, A. S. Tompkins.

Roll call.

President's address.

1. "Surgery in the Hemophiliac," Dr. Julius H. Taylor.

2. "Diverticular of Bladder," with report of case, Dr. W. R. Barron.

3. "Electrothermocautery Treatment of Leucorrhœa Due to Endocervicitis," Dr. Lindsay Peters.

4. "A Short Practical Paper," Dr. Pinkney V. Mikell.

5. "Some Abuses of Cathartics," Dr. B. H. Baggott.

6. "Gynecological and Orthopaedic Conditions and Their Frequent Relationship," Drs. Boyd and Seibels.

7. "The Practical Value of X-ray Examinations of the Stomach," Dr. R. W. Gibbes.

At the conclusion of the morning session in the court house all of the visiting physicians, together with a number of professional and business men of Edgefield, repaired to the Dixie Highway Hotel, where an elaborate dinner was served in courses. Capt. and Mrs. L. Y. Moore added fresh laurels to their already enviable reputation by the manner in which the dinner was served, especially to so large a number. As the last course was being served, Arthur S. Thompkins arose as toastmaster at the head of one of the long tables and presented several after dinner speakers, the first being former Gov. J. C. Sheppard. He was fol-

lowed by J. W. Thurmond, the Rev. A. T. Allen, J. L. Mims, Dr. Taylor, Dr. Seibels, Dr. Wessinger and T. B. Greneker.

A short business session was held at the hotel in the afternoon. The convention of the second district will be held in Columbia the second Tuesday in July.

R. A. Marsh, M. D., Secretary.

MEETING OF THE S. C. PEDIATRIC SOCIETY, COLUMBIA, S. C., JAN. 10, 1922.

Meeting called to order by the President at 7:30 p. m., at 1309 Laurel street, Columbia, S. C.

Present: Drs. E. A. Hines, R. M. Politzer, D. L. Smith, Wm. Weston, Theo. DuBose, Jr., and W. P. Cornell. Dr. Wm. A. Mulherin, of Augusta, was present by invitation.

Secretary-treasurer reported: Fifty-six dollars in the treasury.

Constitution and by-laws were adopted as follows:

CONSTITUTION.

Article One.—Name. The name of this society shall be the South Carolina Pediatric Society.

Article Two.—Purpose. The main objects of the society are:

1. Self information in all matters pertaining to Pediatrics.

2. Passing on this information to the medical profession of the State so that they will become more interested in Pediatrics and help us to,

3. Educate the laity along lines which will lead to the prevention and lowering of infant morbidity and mortality.

Article Three.—Officers. There shall be a President, a Vice-President, and a Secretary-Treasurer.

The President shall be ex-officio member of all committees.

Article Four.—Election of Officers. The officers shall be elected annually for one term of office with exception of the Secretary-Treasurer, who may be re-elected.

Nomination shall be by ballot and those three securing the highest number of votes on the first ballot shall be the nominees of the second ballot, and the one receiving the highest vote on this ballot shall be elected.

Article Five. — Standing Committees. There shall be a Scientific Committee whose duty will be found defined in the by-laws.

There shall be an Executive Committee whose duties shall be to arrange programs; appoint from the membership of the Scientific Committee the society's essayist to read the society paper, and to generally manage the affairs of the society.

These committees shall consist of three members each and shall be annually nominated from the floor and elected.

Article Six.—Meetings. The fiscal year shall be the calendar year. There shall be two yearly meetings. One at the time and place of the State Association meeting, at which the Pediatric Society's paper shall be read; and a mid-winter meeting in January, the time and place for such to be determined by the Executive Committee.

Article Seven.—Change of Constitution and By-Laws. For a change of the Constitution one year's notice and a two-thirds affirmative vote of those present and voting shall be required.

For change of By-Laws a majority vote of those present and voting, without previous notice, shall be required.

Article Eight.—Eligibility for Membership. Any physician in good standing in the South Carolina Medical Association, and who is interested in Pediatrics, shall be eligible.

BY-LAWS.

Section One.—Dues. Membership dues shall be two dollars per year payable by May first of each year, after which date automatic suspension shall ensue, and notice in writing mailed each delinquent member by

the Secretary, and if said dues are not paid within thirty days thereafter he shall be dropped.

A member thus dropped may be reinstated at any time upon payment of arrears.

Section Two.—Each member shall be furnished a copy of the Constitution and By-Laws by the Secretary-Treasurer.

Section Three.—Temporary Committees shall be appointed by the Executive Committee and shall be automatically discharged upon completion and acceptance by the society of their report.

Section Four.—A quorum for any meeting, regular or special, shall consist of five members.

Section Five.—The annual meeting shall be the meeting held at the time and place of the State Medical Association meeting.

Section Six.—Order of Business. 1. Call to order by President. 2. Roll call. 3. Reading of minutes of previous meetings and adoption. 4. Special remarks by President. 5. Secretary-Treasurer's report. 6. Executive Committee's report. 7. Unfinished business. 8. New business: (a) Selection by vote of topic for society's paper, (b) nomination and election of standing committees, (c) election of officers 9. Papers, discussions and presentation of cases. 10. Announcements. 11. Adjournment.

Section Seven.—The duty of the Scientific Committee shall be to prepare the society's annual paper to be read at the State Medical Association meeting, and any other society papers.

Dr. Smith moved that the Secretary write to every member of the State Medical Association stating the objects of our society and extending a cordial invitation to join our society. This was seconded and passed.

Dr. Pollitzer moved that the Secretary write each County Society, through its Secretary, requesting it to devote one meeting each year especially to Pediatrics.

Dr. Smith amended that our Secretary

suggest, in writing the county Secretaries, the month of February for such meeting. The motion as amended was seconded and passed.

Dr. Hines moved that the topic chosen for the society paper, for reading at the next State Medical Association meeting be "Breast Feeding." This was seconded and passed.

The following Scientific Committee was then nominated and elected: Drs. Smith, Weston and Pollitzer.

Dr. Smith moved that the officers act as Executive Committee until the next meeting of the society. Seconded and passed.

Dr. Wm. A. Mulherin, of Augusta, Ga., addressed the society upon organization lines and gave us valuable advice and information as to future policy.

The meeting then adjourned.

Respectfully submitted,
E. A. Hines, M. D., Sect.-Treas.

LAURENS COUNTY MEDICAL SOCIETY

"Yes, sir, I am going to the Medical Society this evening," said one of the leading physicians of the County Society, although a cold bleak day—very disagreeable for doctors to be out. Oh, yes, it takes just such a determination and some sacrifice that will keep the fire burning with all medical county societies.

The Laurens County Medical Society held its regular monthly meeting on January 23rd at 2:30. It was the regular day of annual election of officers, which resulted as follows:

Dr. W. T. Pace, President, Gray Court.

Dr. J. W. Davis, Vice-Pres., Clinton.

Dr. J. W. Beason, Sec.-Treas., Gray Court.

Dr. B. O. Whitten, Censor, Clinton.

Dr. T. L. W. Bailey, Correspondent, Clinton.

Delegates to the S. C. Medical Association in Rock Hill, in April: Dr. W. T.

Pace, Gray Court; Dr. Rolfe E. Hughes, Laurens. Alternates: Dr. B. O. Whitten, Clinton; Dr. S. C. Hays, Clinton.

The Laurens County Medical Society will meet Monday, February 4th and will discuss the welfare of the baby.

T. L. W. Bailey, M. D.

ORANGEBURG COUNTY MEDICAL SOCIETY

Date of meeting January 12, 1922, Dr. C. I. Green in the chair. Number present 20. Minutes read and approved.

Dr. C. A. Mobley of Orangeburg presented an excellent paper, also Drs. Wm. Weston and Wm. A. Boyd of Columbia. After the meeting luncheon was served.

Our next meeting will be held February 9, 1922, the subject of the meeting will be "Focal Infection."

G. M. Truluck, M. D., Secretary.

ANDERSON COUNTY

The Anderson County Medical Society held its first meeting of the year 1922 at the Country Club January 11th, at 8 p. m. A very delightful dinner was served at the conclusion of which a number of snappy songs, rendered by a local quartet, were enjoyed.

The meeting was then called to order by the President, Dr. Milford. The first speaker of the evening was Dr. J. B. Townsend, who in his brief talk stressed the importance of a close and harmonious relationship in the profession and to always give of one's best service.

The Society was fortunate in having present the distinguished personage of Dr. Stewart R. Roberts of Atlanta, Ga., professor of internal medicine at the Emory University, and who once had the honor and distinction of being President of the Southern Medical Association. Dr. Roberts gave a very instructive and enlightening discourse on "Cardiac Disorders," his lec-

ure being accompanied by lantern slide illustrations operated by his able assistant, Dr. McGarrity. Following brief remarks by Dr. L. O. Mauldin of Greenville, S. C., and Dr. Henry, the meeting was adjourned.

G. S. CLINKSCALES, Secretary.

FIRST DISTRICT SOCIETY

The regular semi-annual meeting of the Medical Society of the First District of South Carolina was held at Walterboro, S. C., on January 3rd, with President J. B. Johnston in the chair. Notwithstanding the severe weather and unfavorable road conditions, the attendance was good. Our organization continues steadily in its growth and very effectually tends to amalgamate the profession in our scope.

The following papers were read and discussed:

1. Case report, Osteomyelitis of Fibula, by Dr. A. E. Baker.
2. Contracted Pelvis, by Dr. Lester A. Wilson.
3. Acute Otitis Media, by Dr. Jno. F. Townsend.
4. The Trend of Medical Thought, by Dr. L. M. Stokes.

After the business session, the society was served a delightful repast at Fishburne's Cafe by the Colleton County Medical Association.

Officers selected for the next year were: Dr. Chas. H. EsDorn, Walterboro, President, and Dr. W. S. Judy, St. George, Secretary. Charleston was selected as the next place of meeting.

W. S. Judy, M. D., Secretary.

NEWS ITEMS

MORE DOCTORS NEEDED IN PHILIPPINES. At present there are only 696 physicians in the Philippines, or one physician for each 11,000 inhabitants. The mortality is 26 per 1,000 against 13 per 1,000 in other countries. It has been figured out that about 3,000 physicians are needed in the Philippines according to a speech by Dr. Jose Albert, Acting Dean of the College of Medicine and Surgery.

INCREASE IN THE ROLL OF THE RED CROSS in foreign countries is attributed to the use of methods in vogue in the American Red Cross in the distribution of badges and buttons, a surplus of which were sent to the League of Red Cross Societies for use in foreign countries.

THE AMERICAN RED CROSS "Child Health Expedition" has been touring cities of devastated France. It has shown for periods of two to three weeks in six French cities. The attendance has averaged about 5,000 persons daily. Every feature of the rearing of children according to the soundest and most approved methods was shown.

DIETITIONS ARE NEEDED IN PUBLIC HEALTH SERVICE, according to a recent circular issued by the U. S. Civil Service Commission. The basic entrance salary offered is \$960 a year with possible promotion to \$1344 a year; to all salaries there is added the increase of \$20 a month granted by Congress.

CANCER FUND. Hon. Hiram H. Mills, of Hingham, Massachusetts, left the sum of \$200,000 to Harvard University for the study of cancer, this fund to be known as the Elizabeth Worchester Mills' Fund in honor of Mr. Mills' wife.

ILLINOIS BIRTH REGISTRATON DRIVE PLANNED Among the states that have not qualified for the United States Birth Registration Area, Illinois stands alone among the northern states east of the Mississippi and the State Department of Public Health has decided to carry out a drive to secure complete birth reports.

TYPHOID DEATH RATE DURING THE WAR. The November bulletin of the Louisiana State Board of Health is responsible for the statement that out of the 4,000,000 U. S. troops in the World War there were only 213 deaths from typhoid! Anti-typhoid vaccine is furnished free to physicians by the Louisiana State Board of Health.

Dr. Harvey Cushing, Professor of Surgery at Harvard Medical School, was elected President of the American College of Surgeons, at its annual meeting held in Philadelphia during the week of October 25th.

DEEP ROENTGEN THERAPY. A new x-ray apparatus, known as the deep roentgenotherapy machine, which is designed so as to allow only the passage of high or peak voltage, is reported to have been perfected in Germany and Switzerland, while we hear that Duane, at the Crocker Institute, is working on a machine of this kind but up to now has not reported results as the treatment is still under trial. In various cases of malignancy, the patient is kept under treatment for hours at a time, and as the constitutional effects of such severe treatment are marked resulting in destruction of blood cells, transfusion of blood is frequently necessitated

President Livingston Farrand, of Cornell University, was elected President of the American Child Hygiene Association at its annual convention in New Haven, on November 5th.

THE AMERICAN SOCIAL HYGIENE ASSOCIATION held its eighth annual meeting in New York city on November 18, 1921, and Dr. Hermann M. Biggs was reelected President.

EDINBURGH ROYAL COLLEGE OF PHYSICIANS has honored Admiral W. C. Braisted, of Washington, D. C., and Dr. Walter L. Bierring, of Des Moines, Iowa, by conferring membership on them in recognition of the efforts of the National Board of Medical Examiners, of which they are both charter members, in promoting closer relationship in matters of medical education between the Old and New World. It is reported that these are the only honorable memberships conferred by the college since 1809.

A PAY CLINIC, the first of its kind to offer a general service in New York City, was opened by Cornell University Medical College on November 1st, making it possible for persons of moderate means to have the services of specialists at fees which cover the actual cost of service, and taking care of that class of persons whose means will not permit them to avail themselves of these services otherwise and who, although they are not in the class of those to whom the charity services are open. The clinic is open every afternoon from 1:30 until 4 o'clock, except Sundays and holidays and on Tuesdays and Fridays until seven P. M. The Cornell Medical Faculty will direct the clinics.

Announcement has been made by the U. S. Public Health Service of a public health institute to be held in Chicago, March 13-18, inclusive, 1922. The institute will be under the direction of Dr. Isaac D. Rawlings, state director of public health in Illinois.

The Grady Hospital Annex for negroes of Atlanta and Fulton counties was formally opened, recently. A modern equipped laboratory, 200 beds, a nurses' home and a clinic were included in the purchase, which cost the city more than \$100,000.

CRIPPLED CHILDREN TO BE CARED FOR BY SHRINERS. Nine free hospitals for crippled children will be erected by the Nobles of the Mystic Shrine throughout the United States and Canada. The sum of \$2,000,000 has already been pledged for the purpose.

FURTHER RECOGNITION WILL BE GIVEN TO FIVE-YEAR MEDICAL COLLEGES according to an official statement from the Conjoint Board of London announcing that students graduating from medical schools which have adopted the fifth year of the curriculum (intern year) before granting the degree of Doctor of Medicine will be admitted to the final examinations of that Board without taking an additional year of study after graduation.

CREMATION OF HUMAN BODIES. The Cremation Society of England reports that during 1920, 1800 bodies were cremated in Great Britain and that among the scientists whose bodies were cremated were those of Sir William Osler and Dr. Cecil Lyster.

THE NEW UNIVERSITY OF JERUSALEM will be built along the lines of the American institutions. American Jewish physicians have contributed \$1,000,000 to build the medical college and an American surgeon assisted by an American staff will be in charge.

INCREASED DEMAND FOR RADIUM. According to the Chief Chemist of the Bureau of Mines, Mr. R. B. Moore, in a statement before the Engineering Foundation, Madame Curie's visit to America seems to have increased the demand for radium and brought out a much more defined interest

in this product. Mr. Moore states that the United States at present is producing more radium than all of the world together.

RESEARCH WORK IN THE SEROTHERAPY OF SLEEPING SICKNESS is to be undertaken through the Colonial Office of Great Britain which is organizing an expedition for this purpose, to include both men and animals, with plans for a two years stay in Africa. The expedition will be in charge of Drs. Marshall and Basselo, of the Uganda Public Health Service, with two assistant physicians and two veterinarians.

HAITI HAS NEW VACCINATION LAW which requires that the doctor or other person attending the birth of a child shall have such child vaccinated within one to three months after birth. The National Public Health Service will provide free vaccination as well as the hospitals and dispensaries subsidized by the State. Every seven years the vaccination must be repeated.

Health conditions in the Navy for this season of the year are better than they have been at any time since records for the seasonal variation of disease have been kept in the Bureau of Medicine and Surgery. The admission rate for all causes for the period ending December 10th averaged 497 per thousand per annum. From all indications it appears that the annual admission rate for all causes, entire Navy, for the year 1921 will be approximately 600 per thousand per annum, which is the lowest in the past five years.

TATOOING DANGEROUS

Cases of syphilis acquired from the instruments used by syphilitic operators during the process of tattooing have been reported from time to time. A primary syphilitic sore, acquired in Plymouth, England, appeared on the forearm of a member of the crew of the U. S. S. Olympia. The patient reported at sick bay November 14, 1921, complaining of a slowly healing sore over a recent tattoo mark on his right forearm. The sore appeared about three weeks after he had been tattooed. The lesion

was buttonlike and the adjacent lymph glands were indurated. A microscopical, dark field examination of some serum from the sore revealed the *Spirocheta pallida*. The sore healed rapidly under the influence of salvarsan.

The following is quoted from the "Bulletin of the Chicago School of Sanitary Instruction" for November 26, 1921.

"The department of health is reliably informed that at this time small pox in its most malignant and dangerous form is prevalent in certain sections of the country. This means that this is the type of smallpox that is fatal to human life, and because this is true the commissioner of health would urge upon the people of Chicago the importance of protecting themselves against this new and dangerous outbreak of the disease by vaccination.

At the last meeting of the American Roentgen-ray Society, Dr. Jarvis, of Barre, Vermont, brought out some very interesting points in connection with the findings in pneumoconiosis among the workers in the granite quarries. It was noted by him that mouth breathers showed the changes less rapidly than nose-breathers. Among the races, the Italians showed the least changes and the Irish the greatest changes. The lack of expansion in the upper right chest and the lower left chest, due to the holding of the rock drill, was regarded as responsible for fewer changes in these two regions. He also noted that during periods of rest the hilus shadows and the peribronchil thickening became less. He also noted, in a number of cases, pleural thickening and pleural effusions, which he ascribed to lymph-block resulting from the fibrosis.

Complying with the request of some of its members, the National Health Council on December 1st, 1921, initiated a course of lectures on the organization and services of health agencies.

The lectures are given each Thursday during the months from December to April and cover 26 national organizations in the

field of public health, each talk being given by an executive of the organization.

A children's week exposition in Mexico City recently was attended by more than 10,000 people. The principal departments visited were those where milk was hygienically sterilized, analyzed, and prepared for infant feeding. Lectures on pertinent subjects were given both morning and afternoon.

A writer in the *Survey Graphic* of November 26, 1921, which is devoted entirely to Ireland, tells about public health in that country. He states that Ireland lags behind most civilized countries as regards preventive medicine. Few, if any, countries, however, have a more complete system of free medical treatment for the poor than has Ireland.

The United States Civil Service Commission states that there is urgent need for reconstruction assistants and aides in physiotherapy and occupational therapy, as trained nurses and physicians, to serve in hospitals and other establishments of the United States Public Health Service and the Veteran's Bureau, in the care and rehabilitation of men injured in the World War. The Commission has announced that it will receive applications for these positions until further notice. Full information and application blanks may be obtained from the United States Civil Service Commission, Washington, D. C.

A feature of the child welfare unit, which the Lady Muriel Paget Mission in Czecho-Slovakia is operating in conjunction with the League of Red Cross Societies, is the automobile clinic which travels through the

country. This clinic, or traveling dispensary, began its work last May and in three months covered over 3,000 miles, serving eleven villages, where about 2,000 children have been treated. The staff consists of one Czecho-Slovak and two English nurses, a Slovak interpreter and the driver. The clinic is held by the local doctor, or, in cases where there is none, by the doctor from the nearest village.

The fourth of the National Health Council reports on the health activities of the United States Government was issued on November 1, 1921. This was a report of the Women's Bureau of the United States Department of Labor. It outlines the history and development of this bureau and summarizes its scope, organization and activities.

The U. S. Public Health Service has felt it necessary to prevent the too optimistic and extravagant claims recently appearing in the newspapers in regard to the curative effects of chaulmoogra oil derivatives on leprosy. While the use of the oil and of its derivatives has resulted in a considerable number of apparent cures, it is as yet too soon to tell whether these will be permanent.

Medical supplies, one of the greatest needs in the famine stricken and disease-ravaged provinces of Soviet Russia, which are being supplied by the American Red Cross and distributed by the American Relief Administration, are being shipped in increasing quantities from the European stocks of the Red Cross and from the United States. By the end of December, 1921, Red Cross supplies valued at nearly \$2,000,000 were sent into Soviet Russia to alleviate the suffering of tens of thousands.

CORRESPONDENCE

January 9, 1922.

Dr. E. A. Hines,
Seneca, S. C.

Dear Doctor Hines:

The enclosed letter is worthy of a place in the permanent record of the Journal.

This French music master had his account turned over by me to the official collector of the Columbia Medical Society, I having never sent a bill in person in view of his known proclivities for paying no one.

Its a gem, and if you see fit to publish it, go right ahead.

Yours,
(Signed) J. H. Taylor.

Columbia, S. C.
May 8, 1916.

Dear Dr. Taylor:

I am sorry to have delayed answering you, but I have been quite "taken" by the way all your statements came.

I must explain to you that after my wife left the hospital, I waited for the bills. Dr. Heyward's came O. K., so that of the Hospital which I partly covered with some cash and a note. But I never heard from you until not so long ago (I have the 1st statement somewhere in my desk) I received a curt bill "typewritten", for \$50.00, with a three lines threat that unless!-etc!

Now that was the first bill I ever received from you. Next was the visit of a disreput-

able collector who got mad at the front door, simply because he could not see me. (My maid has orders not to disturb me under any circumstances when I am in classes—the girls paying to receive a lesson, not for my attending business just then)! Now, if I had been at the door that day, I certainly would have made your collector turn a summersault over my fence. I certainly would have taught him not to cause scandal in front of my house, attracting the attention of all passersby.

From time to time, some statements came, but all contained a very useless and annoying "Addenda".

Now, this past week, not only I received your bill, but the same day, one from a fellow who signs his name Burdell, I think!

Your ways towards me are absolutely different to what I have been accustomed from doctors.

I never had any idea to neglect answering your statements, but as I said, your statements have all been so different from other business people that I have been waiting to hear from you in another kind of way.

I shall send you a check for part of the amount as soon as possible. You need not fear that I am going to run away from this town, without paying you—I have paid others before—and certainly think I can also settle your bill without all these continual vexations, absolutely uncalled for.

I beg to remain,

Yours respectfully,

(Signed)

P. de L.

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

EDITORIAL

ROCK HILL AS A MEDICAL CENTER

Rock Hill is justly proud of her medical men, there being seventeen white and three colored physicians, in the city. Dr. J. R. Miller is president of the local Association and Dr. Frank Strait is secretary and treasurer.

This association maintains a high standard and in addition there is a splendid spirit of fellowship and co-operation among the members of the profession. At present the organization is planning to give those who attend the annual meeting of the South Carolina Medical Association one of the warmest welcomes, as well as the best time they had ever had at a similar gathering.

While there are larger hospitals in the South than the Fennell Infirmary, it is safe to say there is none provided with better equipment for the treatment of patients, nor where the surroundings are

more conducive to rest and recover. This institution was founded by Dr. W. W. Fennell, who still remains as its directing force and surgeon-in chief. The property comprises more than eight acres in a delightful situation. The main building at present accommodates approximately eighty patients, many additions having been made from time to time to meet the increasing patronage. Any physician of York County in good professional standing is permitted to place his patient here for treatment; all major operations, however, being performed by Dr. Fennell.

The Fennell Infirmary including heating, water and ice plants, electric lights and motors, cold storage rooms, a complete laundry, X-ray department; sterilizing outfit for instruments and utensils and a perfect system of sanitation throughout the premises. The private dairy of Dr. Fennell provides pure milk and butter from his



FENNEL INFIRMARY, ROCK HILL, S. C.

fine herd of purebred Guernseys. In fact, nothing is lacking in the requirements of a first class hospital. The following staff of physicians are indetified with the work of the institution: Dr. W. W. Fennell, director and operating surgeon, Dr. W. B. Ward, Ass't Surgeon, Dr. W. E. Simpson, X-ray

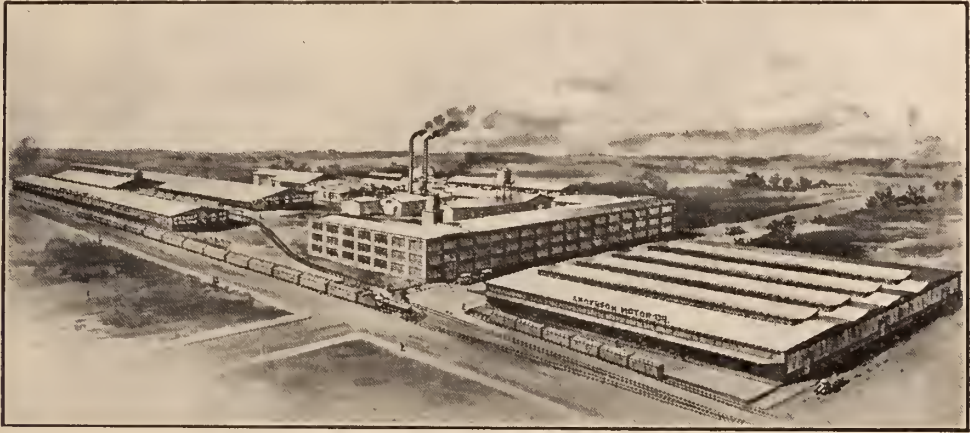
and pathological work, Dr W. C. Twitty, eye, ear, nose, and throat. Rock Hill and York County has reason to be proud of this splendid hospital, a fitting monument to the enterprise and professional knowledge of Dr. Fennell.



SUMNER HOSPITAL, ROCK HILL, S. C.

There is another institution in Rock Hill, though not nearly so big as the Fennell Infirmary, but in the heart of many has a place of its own—we refer to the Summer Hospital. Several years ago Dr. R. E. Sumner, a graduate of the University of Pennsylvania and a popular practitioner and surgeon of the city, purchased a large and commodious dwelling where a limited number of patients are cared for.

Being equipped with up-to-date operating and surgical rooms, with all modern conveniences, this hospital caters more especially to surgical cases, and a large number of local physicians, as well as others, bring their patients here for special treatment and operations. Although only several years old the institution has an established reputation.



ANDERSON MOTOR COMPANY,
Home of Anderson "Sixes," Rock Hill, S. C.

ANDERSON MOTOR COMPANY

One of the most noteworthy industrial enterprises in the Carolinas is the manufacture of the Anderson "Six", an automobile of which not only the Anderson Motor Co. and Rock Hill are proud, but of which the entire South should be proud. Its manufacture is a piece of Southern enterprise, this institution being the outgrowth of the famous Rock Hill Buggy Co., of which J. G. Anderson was president.

The different styles of automobiles now made at the factory includes five and seven passenger touring car, sport, ultra-sport, coupe, sedan and speedster, and these cars are now to be seen on the streets of all the principal cities throughout the United States as well as foreign countries.

In points of mechanical excellence, refinement of detail, simplicity of control, economy of operation, substantial con-

struction, custom-built bodies, lasting finish and deep upholstery, the Anderson "Six" is an outstanding example of good automobile construction. A sketch of the factory in which this well and favorable known car is manufactured is shown in order that one may have an idea of this large and magnificent plant, which represents an expenditure of more than \$3,000,000

An invitation will be extended the S. C. Medical Association to visit the plant which covers more than five acres during their stay in the "Good Town."

WELCOME MEMBERS OF THE MEDICAL PROFESSION — TO ROCK HILL.

WELCOME! There's a whole lot in that little word, especially when it comes from the heart. And friends, for we consider the medical profession our very best and



MAIN STREET, LOOKING EAST, ROCK HILL, S. C.

most loyal friends—every bit of the feeling that our hearts are capable of giving forth, is put in that *welcome* to you. Every part of us is plumb full of real joy at the thought of having you with us on April 18-20th. We are looking forward to grasping everyone of you by the hand and telling you just how glad Rock Hill is to have you with us. We want you to arrange to stay as long as you can. We are going to do everything in our power to make you realize that Rock Hill is the greatest little city in this whole Southland.

The Carolina Hotel has been designated as headquarters for the convention. J. L. McClure, formerly of the Albion Hotel, Augusta, Ga., has recently leased the Carolina. This hostelry has been entirely renovated throughout, and up-to-date service in every way is the aim of the new management, and those who stop here will find that everything possible will be done for their comfort and pleasure. The Anderson Hotel and the very best homes in the city have also been offered for the entertainment of you, our honored visitors, and it will be a very great disappointment to us all if you fail to take advantage of the cordial hospitality that awaits you.

ROCK HILL CHAMBER OF COMMERCE.

ROCK HILL—THE GOOD TOWN

Rock Hill, which will be the meeting place of the South Carolina Medical Association—April 18, 19, 20—is twenty-four miles south of Charlotte, N. C., on the main line of the Southern Railway between Washington and Jacksonville. With a population of approximately 14,000, including mill villages, Rock Hill, the largest city in York County, is in the center of the most progressive and diversified agricultural section of the South, being 690 feet above sea level, with a climate that is both pleasant and healthful.

The city has nine miles of well paved streets and twenty miles of paved sidewalks, having expended \$900,000 on public improvements during the past two years. Rock Hill has all the up-to-date facilities to be found in cities many times larger—electric lights and power, gas, water and sewerage. The city is under commission-manager form of government, her citizens are thrifty and progressive and Rock Hill takes high rank in educational, industrial, commercial and every other line of activity with the rest of the progressive South.

Capital invested in manufacturing plants is more than \$12,000,000, and there is manu-



CAROLINA HOTEL,
Headquarters S. C. Medical Assn. Convention, Rock Hill, S. C.

factured in the city automobiles, gingham, print cloths, sheetings, denims, fine combed yarns, hosiery, fertilizers, ice cream, cigars, ice, grist mill products, cotton seed products, jute bagging, bakery products, soft drinks, iron foundry products, brick, finished building material, all of which make for the advancement of the city's importance.

In addition to being located in a good farming center, Rock Hill's commercial importance is shown by the fact that three strong banks, two trust companies, a large building and local association, all doing a

splendid business, are necessary for the expansive and constantly increasing trade which is pouring into the city from hundreds of farmers who do their marketing and buy their supplies in the city. The citizens are proud of the fact that there was not a single business failure reported during the year just closed.

Few cities of larger size can boast of such educational facilities. The public school system, of which Prof. R. C. Burts is head, embraces seven graded and high schools with an enrollment of more than 4,000 stu-

dents In spite of the fact that the public school system has grown wonderfully the past ten years, the enrollment more than doubling, and while the building program has been carried on quite extensively, it has not been able to keep pace with the increased enrollment.

Winthrop Training School, which is under the management of Winthrop College, supplements in a great way the graded school system, with an enrollment of 435

uable assets of the social and business life of the city. There is no institution in the entire South which surpasses it in the splendid equipment, accommodation of cultural and vocational training provided for young women. During the past year upwards of 2,500 students were enrolled, including 1,100 who attended the summer school. The buildings and property represent an investment of more than \$2,500,000, of which the State of South Carolina only con-



Dr. D. B. Johnson, President Winthrop College, the South Carolina College for Women.

pupils, measures up fully to every demand made upon it both as to capacity and efficiency.

From its small beginning in Columbia thirty-five years ago, Winthrop, the South Carolina College for Women, has grown to be the present colossus of education and for twenty-seven years Rock Hill has been honored by its presence. This great institution is generally regarded as one of the most val-

tributed \$728,000, and expansion of its resources goes steadily onward. In co-operation with the U. S. Department of Agriculture the extension of welfare work and home economics has accomplished far-reaching and beneficent results. One of the big assets of the college is the model farm. There are 260 acres and remarkable results have been attained through the application of scientific farming. Milk, but-



MAIN BUILDING WINTHROP COLLEGE, ROCK HILL, S. C.

ter, eggs, chicken, beef, fresh vegetables, etc., of all kinds are supplied the students from this farm.

Winthrop has contributed its big part toward making Rock Hill a "Good Town," but what could and should be said of this great institution of real learning is not possible in a limited space. There is no use in trying to put a description to words that would convey its bigness and importance. It is said that "Every great institution is the lengthened shadow of a single man,"

and in this instance the lengthening shadow is that of Dr. David Bancroft Johnson, its president and founder. He is also the dean of college presidents, having served longer than any other president of a college in the United States.

The Young Men's Christian Association is one of the live-wire organizations of Rock Hill, the work here being on the community-wide basis. Its principal emphasis is on boys work, and here its best work is done. The Y. M. C. A. program of four-

square development in producing real results in the lives of the boys of the city.

Two branch associations are in operation in two of the mill villages, giving an intensive program of Y. M. C. A. activity in these places.

Rock Hill is fortunate in having live Kiwanis and Rotary Clubs. The business and professional men who compose these organizations recognize the wonderful potentialities of closer co-operation and friendship among those who are struggling to make Rock Hill and York County a leader in the State. The spirit and aim of these valuable clubs is to foster fellowship, to promote good will and closer clean relations among competitors in the business world, and to break down the stiff-necked formality that often prevails in the relations of business men, and at the same time co-operate with all other organizations whose object and aim is for the betterment of the business and moral atmosphere of the community.

The Rock Hill Chamber of Commerce is the power plant that generates the public spirit and enthusiasm of the citizen and helps to make Rock Hill a Good Town.

In no city is there more of the pull-together spirit and co-operation than is shown by this progressive body and its membership always stands ready to assist any worthy project that aims for the betterment of the community.

The leading spirits do not confine their civic work to the uplift of the city, but do all in their power to co-operate with the citizens of the rural district in their endeavor to bring about a steady development there also.

Rock Hill is fortunate in having two progressive papers. One of them is a daily, The Evening Herald; and the other, The Record, is a semi-weekly. Both of these papers are always on the alert for anything that will work for the betterment of Rock Hill and York County, and Rock Hill's progress during the past is largely due to their progressive work.

PROVISIONAL PROGRAM ROCK HILL MEETING SOUTH CAROLINA MEDICAL ASSOCIATION, APRIL 18, 19, 20, 1922.

(These papers will be re-arranged before final program.)

Address in Surgery: Dr. Thomas S. Cullen, John Hopkins Medical School Baltimore.

Address on Tuberculosis: Dr. Henry Boswell, Sanatorium, Miss.

Address in Pediatrics: Dr. Wm. A. Mulherin, Medical Department University of Georgia, Augusta, Ga.

Paper on Improvement in Hospitals in South Carolina. By representative South Carolina Hospital Association.

Paper on Breast Feeding: By Representative of South Carolina Pediatric Society.

1. Dr. T. H. Dreher, St. Matthews, S. C.: "An Experience with Radium."

2. Dr. G. T. Tyler, Greenville, S. C. Title unannounced

3. Dr. George H. Bunch, Columbia, S. C. "Acute Osteomyelitis in Children."

4. Dr. T. Russell Littlejohn, Sumter, S. C. "Basal Metabolism as an aid in the Diagnosis of Toxic Goiters."

5. Dr. Sophia Brunson, Sumter, S. C.: "Constipation, Its Cause and Cure."

6. Dr. S. G. Glover, Greenville, S. C.: "Retroperitoneal Sarcoma in Children, with report of a case."

7. Dr. Milton Weinberg, Sumter, S. C.. "Tuberculosis of the Kidney."

8. Dr. W. F. R. Phillips, Charleston, S. C. "Medical Nomenclature, Desirability of Uniformity and Suggestion of a Plan of Achievement."

9. Dr. M. R. Mobley, Florence, S. C.: "Some Anatomical Considerations of the Mastoid Process of the Temporal Bone."

10. Dr. H. M. Smith, Columbia, S. C.: "The Spinal Fluid and Syphilis."

11. Dr. Chas. J. Lemmon, Sumter, S. C.: "The Diagnosis and Treatment of Toxic Goiters."

12. Dr. Wm P. Cornell, Columbia.: "Does Adult Tuberculosis Begin in Infancy Always?"

13. Dr. Lindsay Peters, Columbia.: "A plea for Conservatism in Surgical Treatment of Eclamptogenic Toxemia of Pregnancy."

14. Drs. Wm. A. Boyd and Robt. E. Seibels, Columbia. Title unannounced.

15. Dr. H. W. Rice, Columbia.: "The Leucocyte count in the Diagnosis and Prognosis of Appendicitis."

16. Dr. D. M. Crosson, Leesville.: "The Relation that Legislation should have to the True Medical Profession."

17. Dr. E. W. Carpenter, Greenville.: "Para Nasal Sinuses of Children with Special Reference to Ocular Symptoms." Lantern Slides.

18. Dr. Carl B. Epps, Sumter: The Surgical Treatment of goiter: With Case Reports."

19. Dr. T. B. Reeves, Greenville: "Cholecystitis."

20. Dr. Baxter Haynes, Cuba: "One Year In Preston, Cuba Oriente, Cuba, and some personal experiences in pellagra."

21. Dr. Marion H. Wyman, Columbia. "A Genito-Urinary Routine Suggested as practical for The General Practitioner."

22. Dr. Geo. E. Thompson, Inman.: "Obstetrics on the R. F. D."

23. Dr. F. M. Durham, Columbia.: "The Treatment of Chronic Loose Bowels."

24. Dr. Francis B. Johnson, Charleston.: "Blood Chemical Analysis in Diagnosis and Treatment."

25. Dr. Wm. R. Barron, Columbia : "Some Observations in Prostatic Surgery."

26. Dr. H. A. Mood, Sumter. "Creeping Eruption, an Effective Treatment, with case Reports."

27. Dr. Edward F. Parker, Charleston. "Bunkitis—a National Disease."

28. Dr. J. W. Jervey, Greenville: "The Importance of Certain Mastoid and Lateral Sinus Infections often mistaken for Commoner General Infection "

29. Dr. George R. Wilkinson, Greenville: "Asthma and what can be done for it."

The House of Delegates meets at 8 P M. April 18th.

SOME FACTORS THAT INFLUENCE THE DEVELOPMENT AND GROWTH OF CANCER.

The recent National Cancer Week, under the auspices of the American Society for the Control of Cancer, has stimulated the public interest in this ever-present problem. As a result, patients are beginning to make inquiries about cancer, and are no longer content with the exaggerated and false claims of the charlatans and the followers of cults. Not only on general principles, but as a matter of medical education, the medical profession should see that what knowledge is distributed to the public as authentic is true, and where complete ignorance exists, it should be frankly confessed. It is only by such methods that we can approach any problem with an expectation of eventually satisfactory results.

Undoubtedly a knowledge of what is already known about cancer, if widely disseminated and properly acted upon, will greatly reduce the present death rate from this disease by causing the patients to seek competent advice in the early stages, and to abandon habits that tend to produce cancer when the first sign of irritation appears. When a crack on the lip or a white spot on the tongue occurs in a smoker, the cessation of smoking, or the proper care of the teeth, will often prevent cancer.

In the early stages of cancer a properly performed excision, preferably with an electric cautery, will produce a high percentage of cures. Later, an extensive block dissection will save a few patients who are otherwise doomed. The application of radio-active remedies has a distinct place occasionally as the sole treatment, as in lymphosarcoma, or combined with operative procedures, as in certain types of cancer about the mouth, or in cancer of the uterus.

It is important to recognize that while we do not know the direct cause of cancer, we are equally ignorant of the direct cause of every living cell. The origin of life itself is still a complete mystery, and the origin of every plant or animal, from the seed or ovum, is one of the wonderful things of nature which is not understood. By studying carefully, however, the methods of growth and the habits of cells, or the tissue which is an aggregation of cells, or the animal or plant which is made up of tissues, we can learn a great deal. A cancer seems to be immature cells that doubtless spring from some slight injury where the normal immature cells would go through a complete cycle and become mature, whereas the malignant cells quickly beget other immature cells which never reach maturity. Cancer is always a local disease in the early stages, and only about 10 per cent of cancers are so malignant that they cannot in all probability be cured by an early extirpation.

The influence of heredity upon cancer has been discussed from many angles. Many authorities claim that there is little or no influence of heredity, and doubtless in some instances the wish is father to the thought. Any one, however, who has observed certain families in which cancer is frequent, and others in which cancer rarely occurs, must be impressed with the fact that heredity has some influence. If this is true, whether it be politic to say it or not, we should at least say

what is true, and let the results take care of themselves. But in this instance, the truth is by no means discouraging. Ewing quotes with apparent approval (Neoplastic Diseases, Philadelphia, 1919, page 107) a statement by LeDoux-LeBard that "In the interest of the public, this doctrine (heredity) ought to be combatted." The interest of the public should, first of all, lie in ascertaining the exact truth. Dr. Maud Slye, in the *Journal of Cancer Research* for January, 1920, seems to have given convincing evidence that the theory of heredity in cancer is not depressing, but on the other hand is distinctly encouraging and hopeful. By ceasing to mate two representatives of cancer families, cancer could be greatly decreased. The inheritance of cancer, according to Dr. Maud Slye, behaves as a "recessive," so that if one member of a family in which cancer is not prominent is mated to a member of a family free from cancer, there is no great likelihood of cancer developing in their children. Dr. Slye says, "On the other hand, the insistence that cancer is not hereditary, and the continued matings of two cancer-bearing individuals, results in an ever increasing amount of cancer in the human race." This, however, if persisted in long enough, will eliminate these families. The great trouble is that after one such mating, the children will be mated to noncancer-bearing families, and the disease will thus be perpetuated.

Inbreeding does not influence the incidence of cancer. In experimental work such as the work on mice, it is necessary to inbreed in order to study the effects of heredity, instead of adding unnecessary unknown elements by hybrid crosses. Strictly speaking, inbreeding in mice eliminates cancer if persisted in long enough, because eventually all the offspring will die of cancer, and thus wipe out the strain. It is therefore possible, according to Dr. Slye, to eliminate cancer from the human race by choosing individuals with an ancestry in which cancer either does not exist, or is distinctly recessive. This is true in mice either in inbreeding or hybridization.

The study of cancer by experiments in mice has given much valuable information. Mice are not only particularly subject to cancer, but their food and general environments correspond very closely to those of man. Their cycle of life is short, so that what corresponds to a year in a man's life would be only a matter of a few weeks in a mouse. Consequently many generations may be observed and de-

ductions can be made that would be impossible during the life of one individual from clinical studies in man. Dr. Slye has shown by breeding of mice that if a male and a female mouse of known cancer history are mated, and their progeny inbred, eventually after a few generations, this strain is wiped out by cancer. She gives a diagram showing such mating, in which the strain was wiped out in six generations, and the death of most of the mice was from cancer. In the last generation, consisting of two mice, both died of cancer. Some of the mice in earlier generation had acute infections. It must be recalled that cancer usually attacks animals or men of middle age, and those animals that died of infection while young might have developed cancer if they had lived long enough.

These experiments Dr. Slye has repeated in a number of other instances, with practically the same result. We have no right, then, to disregard facts merely because they may not be pleasant, and with such constant results following the breeding of cancer mice, we should at least acknowledge that the probability is that the same thing would happen in man.

As has been stated, if cancer is hereditary, the proper mating of human beings with some regard to cancer ancestry would be of the greatest benefit to mankind. Theoretically, it seems possible to eliminate cancer in this way. This experimental work, of course, has nothing to do with the inoculation of cancer, but deals with the breeding of mice in which cancer has spontaneously arisen.

The influence of pregnancy on cancer is another interesting feature of this disease. When it is discovered that a pregnant woman has cancer, the question frequently arises whether the pregnancy should be terminated in the interest of the mother. Dr. Maud Slye (*Journal of Cancer Research*, January, 1920, pages 25-52) has given a very illuminating study on the relation of pregnancy to tumor growth, as observed in mice. The tumors selected for the study were of the same type, and of the same organ. They were alveolar cancer of the mammary gland. This type of tumor in a mouse can be readily observed each day. Dr. Slye found that without exception the amount of tumor grown by a female while reproductive was much less than during her non-productive period, and that the amount of tumor in reproducing females was strikingly less than in non-producing females. The normal course of these tu-

mors in mice that are not breeding is very rapid. The mouse rarely lives over six weeks, and the tumors grow to a large size. When, however, these mice with cancers of the breast are bred, the tumor hardly grows at all during the period of pregnancy. The duration of the tumor is greatly prolonged, and the mouse frequently lives nearly a year after the appearance of the tumor, during which time she may bear six or eight litters of young. But, if the mouse ceases reproducing, the tumor grows with great rapidity, and to a large size, and the mouse often survives only a few days after the birth of the last litter. During the six or eight days the mouse is non-productive, the tumor grows larger than during the eight months or a year when the female mouse is reproductive. It seems, therefore, according to Dr. Slye, that while the mouse is reproducing embryos, she is producing the tumor very slightly, but after the pregnancy is terminated the biologic resources of the mouse concentrate on the multiplication of the tumor cells.

Cancer and pregnancy, then, being both growth processes, seem to draw upon the same energy in an animal, and are nourished by the same food. When a female is well advanced in tumor growth before pregnancy occurs, the offspring is usually premature. This work has marked clinical bearing. If, for instance, a cancer of the breast in a woman is discovered during pregnancy, no effort should be made to terminate the pregnancy, but the growth should be removed as soon as possible. This, according to experimental evidence, will not only favor the development of the embryo, but will extirpate the cancer at a time during which its growth is less active, and theoretically when metastases would be less likely to occur. After delivery, however, the energies of the female are concentrated on the growth of the cancer.

This corresponds closely to clinical observation, for it is well known that cancer of the breast in a lactating woman runs a very rapid and quickly fatal course. Possibly the increased function due to lactation, together with the manipulation and massage in nursing, may also hasten the growth, but it seems reasonable to believe that the results of Dr. Maud Slye's experiments will explain in a large measure much of the known virulent

malignancy of cancer developing in lactating women. If cancer is found in a pregnant woman, the greatest care should be taken to conserve the pregnancy, and at the same time to eradicate the cancer during pregnancy.

Another important factor in the growth of cancer is massage. Too frequently, particularly in cancer of the breast, we find that some neighbor, or some member of the various cults of drugless healing, has attempted to "absorb" the growth in the breast by massage. In a recent paper on the relationship of massage to metastasis in malignant tumors, Dr. Leila Charlton Knox (*Annals of Surgery*, February, 1922, pages 129-143) has made both a clinical and an experimental study of the effect of massage in cancer. A patient was observed in whom massage of a breast tumor had been practiced before admission to the hospital, and metastases were scattered widely through the pectoral muscles, where metastases are usually rather infrequently found. In experimental work Dr. Knox found that very gentle massage of certain transplanted cancers in mice for a period of two to five minutes, distributed over a number of days, would set free particles of tumor which would form emboli in the lungs and produce numerous metastatic tumors in many instances, when control experiments without massage showed a much smaller number of metastases. The importance of avoiding unnecessary diagnostic or operative manipulation of a tumor and, further, of cautioning against "rubbing in an ointment" or any efforts at massage of a suspected growth cannot be too greatly emphasized.

It seems, then, that there are three factors in the growth of cancer which are not sufficiently stressed, and which the work of Dr. Maud Slye and of Dr. Knox has greatly illuminated:

- (1) The influence of heredity on cancer, and the possibility of eliminating or largely decreasing the disease by proper mating.

- (2) The retarding effect of pregnancy on the growth of cancer.

- (3) The influence of massage in promoting early metastases and growth in many types of cancer.

J. SHELTON HORSLEY, M. D.

Richmond, Va.

CAVEAT BESTIA

We all know the kind of doctor who says to his patient something like this:

"Well, friend, its a good thing you came to me when you did, or you would have been in bad, sure", and his inelegance of expression is an exact measure of the inelegance of his soul, his egotism, his cupidity and his stupidity.

He is of the same common garden variety as he who believes, or professes to believe, unpleasant or scandalous things his patients tell him about his professional contemporaries.

He is of the kind, who, if not directly outspoken in denunciation of his colleagues' work, turns to a bystanding assistant, in the hearing of his patient, and with an assumed disparaging and contemptuous air, says: "Look at that, will you."

His is the type of misbegotten medicine which likes to talk in medical meetings, sometimes with open bravado, sometimes with mock modesty, referring casually or inferentially to the cases that he has successfully and brilliantly handled after others have failed—the *vade mecum* of medical and surgical profundity.

There is no use wasting time or breath in excoriating such a character. The fellow is a crook and we all know it. But what are we going to do with him—how should he be punished, beyond the punishment he will inevitably bring upon his own head?

How would it do to make him chew up, swallow and digest a heavy leather bound copy of the code of ethics once a week until convalescence is well established?

You all know him, gentle readers, what do you say would be the punishment to fit the crime? Send in your suggestions.

Ah, brethren, in the words of the apocryphal Ecclesiasticus: "Blessed is he who hath not slipped with his mouth, and is not appalled by the multitude of his (own) sins."

J. W. JERVEY, M. D.,
Greenville, S. C.

THE SCIENTIFIC ATTITUDE

Science is teaching man to know and reverence the truth and to believe that only so far as he knows and loves it can he live worthily on earth, and vindicate the dignity of his spirit.—Moses Harvey.

Medicine is both a science and an art. It has to do with knowing and doing. It is not an exact science—more's the glory, for exact sciences are inert and uninteresting. The lot of the medical student should be miser-

able unless he knows something each day that he did not know the day before.

And every physician should remain a student the whole of his natural life. A pitiable sight is the practitioner who was known as a good student but who after five years, more or less, has degenerated into a routinist, never reviewing his former knowledge or adding to his original store. Such a man, though perhaps skilled in so-called practical affairs, forgets more and more medicine each year until it is difficult for him to keep up. He begins to decry theory and to extol practice; he thinks only of results and not of causes; he speaks magnificently of "common sense" and "letting nature take its course."

The real trouble with this average individual is that he has never acquired the scientific attitude. It all depends upon the early approach and the mental slant. The eager student loves learning for its own sake and believes that no knowledge is useless, provided it is correlated. He knows that science is organized knowledge. The scientific attitude means that nothing must be accepted unless it is known; that nothing can be known until it is proved; that everything shall be met in the spirit of hesitant belief. This smacks of pessimism and one poet at least has been led to exclaim:

"O star-eyed science! Hast thou wandered there,

To waft us home the message of despair?"

But nothing could be farther from the truth. It is not despairing to search for the truth. The challenge is "how much do you know?" and "how can you prove it?" The doubting Thomas has a place here.

What has no place in science is the post hoc ergo propter hoc habit of mind. It is the most dangerous of all doctrines for the medical man. It is the rankest empiricism and furnishes the platform for all quacks and imposters. "Whereas I was blind, now I see" is an insidious appeal to effects in utter disregard of the means—the cry of the charlatan. Montaigne wrote that, when a man is sick and gets well, he can not say whether it was because of the remedies used, the lapse of time or his grandmother's prayers. It requires a strong mental effort to get away from the belief that whatever happens after an event is always on account of it; but we must get away from this belief or we shall not retain our clear thinking.

After all it is the acquisition of knowledge which is enticing and inspiring, not merely

the possession of it. "If I held truth captive in my hand," says Malebranche, "I would let it fly that I might again pursue and capture it." And it is well to remember that all the new is not scientific nor all the old empiric. Science teaches us to unlearn many things each day and to relearn as many the next; for there is hardly anything new except what has been forgotten.

The scientific attitude means:

1. **ACCURACY.** A band of seekers after the truth must abhor inaccuracy. It is the sin of our age. We are inaccurate in thought, in speech, in spelling, in writing, in the way we live. Truth is the goal; it develops character and character tells in one's work.

2. **FREEDOM.** Independent thinking represents the highest product of scientific education, not blind following of authorities. There are no authorities in medicine. Your supreme court is your own judgment, tested in the light of experience. After all, the distinction which a scientific physician possesses over the empiricist is the ability to discriminate—to apply a general deduction to a particular case.

3. **INDIVIDUALITY.** This means out in the open, every tub on its own bottom and no hiding in the herd. Team work is the modern slogan and it is essential for progress; but the training of the individual is the truest expression of scientific effort, giving the cleancut cog in the wheel, making for perfection of the whole machine. Thus, medical practice can well be conducted in groups, for no man diagnoseth to himself; but, if the group discounts the individual and the individual forgets the patient, we have gang medicine and syndicated science, than which nothing could be more unscientific.

4. **PEACE.** Science, like virtue, is its own reward. The satisfaction which comes from knowledge well gained and well used is comparable to that from duty well performed. Nothing can be more worthy than the sincere devotion to a profession for its own sake. Emerson felt this satisfied spirit when he said: "There is a time in every man's education when he arrives at the conclusion that envy is ignorance, that imitation is suicide and that the only kernel of nourishing that can come to him is in cultivating assiduously that plot of ground which nature has given him to till." No one ever gained permanent advancement by pulling down others; and real merit does not go unrewarded. The peaceful mind which makes the man of

science a brother to his colleagues is one of the enduring contentments of life.

HUBERT A. ROYSTER, M. D.,
Raleigh, N. C.

COMMITTEE APPOINTMENTS FOR 1922

1.—On public Policy and Legislation: Dr. A. E. Boozer, chairman, Columbia; Dr. Fred Williams, Columbia; Dr. P. G. Ellisor, Newberry.

2.—On Necrology: Dr. R. C. Gyles, chairman, Blackville, Dr. R. O. McCutcheon, Bishopville, Dr. S. G. Love, Chester.

3.—On Scientific Work: Dr. W. F. R. Phillips, chairman, Charleston; Dr. J. W. Davis, Clinton; Dr. R. A. Marsh, Edgefield.

4.—On Hospital Standardization: Dr. Samuel Orr Black, chairman, Spartanburg; Dr. R. T. Ferguson, Gaffney; Dr. W. P. Turner, Greenwood; Dr. T. R. N. Wilson, Greenville; Dr. W. W. Fennell, Rock Hill.

5.—On Graduate Instruction: Dr. J. Heywood Gibbes, chairman, Columbia; Dr. R. E. Hughes, Laurens; Dr. Paul K. Switzer, Union.

6.—On Health and Public Instruction: Dr. F. A. Coward, chairman, Columbia; Dr. D. B. Frontis, Ridge Springs; Dr. E. C. Doyle, Seneca.

7.—On Child Welfare: Dr. H. A. Mood, chairman, Sumter; Dr. D. Lesesne Smith, Spartanburg; Dr. S. G. Glover, Greenville.

8.—On Study and Prevention of Tuberculosis: Dr. Ernest Cooper, chairman, Columbia; Dr. J. D. McDowell, York; Dr. M. L. Parler, Wedgefield.

9.—On Study and Prevention of Venereal Diseases: Dr. Milton Weinberg, chairman, Sumter; Dr. E. C. Baynard, Charleston; Dr. T. M. Davis, Greenville.

10.—On Entertainment: Dr. J. R. Miller, chairman, Rock Hill; Dr. David Lyle, Rock Hill; Dr. W. W. Fennell, Rock Hill; Dr. W. E. Simpson, Rock Hill.

DEATH OF DR. J. W. BABCOCK

As we go to press, we learn of the death of one of our most distinguished members, Dr. J. W. Babcock of Columbia. The Committee on Necrology will pay due respect to this able physician and public servant, but the Journal feels a keen loss which we pause to acknowledge.

Dr. Babcock honored the Journal by publishing his early investigations on Pellagra in it and since that date the Journal has been quoted throughout the civilized medical world.

Dr. Babcock was a rather frequent contributor to the columns of the Journal, indeed he wrote the Editor just a few days before his death that he would shortly send in an Editorial on some subject of scientific interest at the present time.

Dr. Babcock had an international reputation due to his investigations of Pellagra. He contributed also largely to the literature on the insane through journals devoted to that specialty.

As every physician should be, Dr. Babcock was a loyal citizen, fully alive to the best interests of his community and State. As every physician should be, Dr. Babcock was interested in Art and Literature and was conversant with the broad field of general knowledge. He had the advantage of a splendid literary and medical education, having been trained at Harvard University. He was one of the best known physicians in South Carolina.

ON TO ROCK HILL

The Secretary recently visited Rock Hill and perfected arrangements for the meeting of the South Carolina Medical Association, April 18, 19, 20. Members will please bear in mind that the House of Delegates this year convenes at 8 P. M. April 18th. There will then follow two days of Scientific sessions namely, the 19th and 20th.

Dr. J. R. Miller is the Chairman of the Committee on Arrangements. The Hotel Carolina has been selected as headquarters. All communications should be sent direct to this hotel with reference to reservations. The hotel facilities of Rock Hill are somewhat limited, but the efficient committee on Arrangements had developed a plan for taking care of every member of the Association who will attend. If there are any ladies who wish to attend this meeting, the Hotel Carolina, should be notified in advance in order that the number desiring accommodations may be ascertained.

The entertainment features for the Association this year, while not so elaborate as is the case sometimes will be just as good. The Winthrop College authorities will tender a reception to the Association on the evening of the 19th, and following the reception there will be a demonstration by the Department of physical education. The latter feature is one of the famous annual events of South Carolina and will be repeated especially for the members of the Association.

Alumni banquets will be held as usual.

In addition to the meeting of the State Medical Association, there will be a meeting of the South Carolina Public Health Association and the South Carolina Pediatric Society.

The guests this year are men of national reputations. The program, therefore, will be of unusual interest. The two days should provide ample time for completion of the splendid list of papers provided.

This issue of the Journal has been edited with great care. It should prove of keen interest to every member of the Association. The special editorials have been contributed by some of the ablest men in America. The Department Editors have, without exception, provided splendid articles.

We are greatly indebted to the Chamber of Commerce of Rock Hill for the valuable information furnished about the city in which our meeting will be held.

ORIGINAL ARTICLES

THE CANCER PROBLEM IN THE SOUTHERN STATES

By **FREDERICK L. HOFFMAN, LL. D.**,
Third Vice President and Statistician The
Prudential Insurance Company of America,
Newark, N. J.

The problem of cancer control in the Southern States differs from the corresponding problem of the North chiefly as regards the vast negro population and the inadequate distribution of qualified medical and surgical service throughout the rural sections. For a considerable portion of the rural South no data whatever are available at the present time to disclose the true incidence of cancer occurrence, but for the remainder, which is included in the registration areas, the evidence is quite conclusive that the rate is lower than in the North and West, and lower among the colored than among the white population. For some years past I have urged upon the Southern medical profession the necessity of a more concentrated scientific interest in the cancer problem and upon the public, the necessity of a more sympathetic appreciation of the efforts initiated by the American Society for the Control of Cancer, sustained by local educational propaganda on the part of medical and allied societies. In an address read before the Orleans Parish Medical Society on May 9, 1921, I took occasion to present some new data, based chiefly on the experience of the New Orleans Charity Hospital for the decade ending in 1919. Investigation at the time brought out the appalling excess in the frequency of malignant, and especially benign, uterine tumors among the negro population when compared with the corresponding white population of the

same section. The term "negro" for the present purpose is, of course, used in the generally accepted sense of the term, but if it were possible to separate the mixed-blood from those who are still relative pure-blood, I am inclined to think that the evidence would disclose a higher rate of cancer occurrence among those having a relatively large proportion of white intermixture.

Apparently, cancer diminishes in frequency with diminishing distance from the equator. Continuous exposure to conclude that the causative factors responsible for this disparity are 'climatic', for there are no reasons for believing that a higher temperature per se inhibits a cancerous tendency. Continuous exposure to tropical sunlight is a recognized cause of cancer of the skin, at least in certain sections of the globe, such as northern Australia, where the subject has been carefully investigated. As the result of my own investigations in the tropics, including Central and the northern portion of South America, I am convinced that the practical non-occurrence of malignant disease in native races is attributable primarily to nutrition, clothing, and what is generally summarized in the term environment and tropical conditions of life. The food in the tropics and sub-tropics is more simple, the protein content of the food is generally less, while loose clothing is the rule.

During my recent investigation into problems of tropical mortality in Peru, Bolivia, and Brazil, I did not meet with a single authentic case of breast cancer, while other forms of cancer are extremely rare. The absence of breast cancers in native races is not a matter of conjecture, or the result of imperfect diagnosis, or non-medical treatment, but a fact sustained by every medical and surgical practitioner whose evi-

*Read at Columbia Medical Society Cancer Meeting, January 12, 1922, Columbia, S. C.

dence has been placed at my disposal. The almost non-occurrence of breast cancer among the women of primitive races is fully supported by my personal investigation among the Navahoes, the Zunis, and the Hopis of the Southwest, and by my statistical researches for Hawaii and Japan. Practically all the women of native races live simple lives, are undernourished rather than overnourished, and wear clothing consisting of a single garment, without corsets or stays likely to produce traumatism in some form or other. In the Southern States of the United States cancer, before the war was practically unknown among the slave population. The infrequency of uterine cancers was noted by several careful observers of the period. To-day the disease is common, if not of alarming frequency, including non-malignant tumors of the generative organs. The only profound changes that have occurred during the intervening period of fifty or sixty years are (1) the adoption of the white people's mode of clothing, (2) hypernutrition, (3) a lower birth rate and a higher frequency of abortions as the result of birth control practices with its attendant evils, (4) the artificial feeding of infants, interfering with normal processes of lactation, and (5) modern methods of housing, with resulting exposure to coal smoke, the sulphurous contents of which it is claimed may act as an irritant or exciting agency.

In other words, what is called a civilized mode of life common to nearly all so-called civilized countries to-day is largely a perversion of normal conditions of existence which preclude many of the irritants which lie at the root of the cancer problem. As thus conceived, the 'prevention' of cancer occurrence is seemingly hopeless. Educational efforts and improved medical and surgical technique can at best aim only, at least as regards the near future, at the prevention of death from cancer through skillful operative, radiological, and other drastic interference. This hope, justified by an im-

mense amount of scientific evidence, rests upon the conviction that the earliest possible diagnosis of malignant disease, if followed by the earliest possible removal or destruction of the offending cancerous mass, will, in a large number of cases, save life and materially add to the after-lifetime of the patients concerned.

It is upon these basic principals that the American Society for the Control of Cancer rests its appeal to the medical profession and the general public for the largest measure of active cooperation in the furtherance of its work. The problem to be faced is indeed protean. Some 90,000 people die annually from this disease, of which eighty-five per cent. are over forty years of age. The rate of frequency in the U. S. registration area in 1920 was 83.4 per 100,000 of population; and for the Southern States for which the information is available the rate was 55.7 per 100,000 for the white population, and 40.2 for the colored. Much to my regret, the statistics for the whole of South Carolina are probably defective to a degree that they cannot be utilized for the purpose of clearly emphasizing the cancer problem in a typical Southern State. But for Charleston, S. C., during the period 1916-1920, the rate of cancer mortality was 66.5 per 10,000 for this white population, and 44.8 for the colored. This compares with a rate of 48.6 per 10,000 for the period 1881-1885 for the white population, and of 42.9 for the colored. Making use of such data as are available, it may be conservatively estimated that the present combined mortality from cancer for both races, for the State of South Carolina, is 32.9 per annum. This loss is not only of humanitarian and social but also of considerable economic importance. Deaths from cancer are practically all of persons of adult age, in the production of which a considerable capital has been sunk, and an adequate return on which can only be realized by a normal after-lifetime representing the years of most effective economic activity. The increase in the can-

cer death rate, which is indisputable regardless of much controversy on the subject, justifies the use of an expression first utilized in my cancer address before the American Gynecological Society in 1913, when I spoke of the "menace of cancer" not only to the American population but to the population of practically the whole civilized world. It would serve no needful purpose to restate the statistical conclusions arrived at as the result of my world survey of the cancer problem, published about seven years ago. The intervening years have sustained every argument advanced at the time, and the increase in cancer has continued except in such cases where practically a maximum figure has almost been reached. It is probably not going too far to say that at the present time the cancer mortality in the entire United States, including its non-contiguous possessions, is not less than 100,000 per annum. But it may serve a useful purpose to summarize in brief the principal conclusions as follows:

(1) The liability to cancer is unquestionably on the increase, and the disease is more of a menace to-day than at any time in the past.

(2) Cancer, as far as known, is not an infectious or contagious disease.

(3) Cancer, as far as known, is not transmitted by heredity from parent to offspring.

(4) Cancer apparently occurs most frequently in persons who are in the best of health and who represent a well-to-do type rather than the poor.

(5) Cancer is not curable by any of the countless so-called 'cancer cures' advertised for purposes of wrongful gain, nor is it amenable to Christian Science or other forms of mental healing.

(6) The sole reliance in cancer cases at the present time is radical interference with the offending growth, by (a) surgical operation, (b) radiological or X-ray treatment, and (c) caustics of various kinds.

The foregoing methods are effective in

saving countless years of life to those who are saved at the time from the indescribable horror of a death from cancer. If it were possible to ascertain the total number of operations, and the number of years of additional lifetime gained by such operations, the result would constitute the most illuminating and gratifying chapter in modern medicine.

In taking the position that cancer is not an infectious or transmissible disease, I am not unmindful of the many statements to the contrary, made in good faith by those who believe that organisms have been found to which the true origin of the disease may be true. The numerous organisms which have been thus pronounced as cancer causes are in themselves evidence of the practical hopelessness of discovering the true nature of the disease by bacteriological means. Quite recently fresh evidence in support of the theory of infection has been advanced by Dr. W. Ford Robertson, pathologist to the Scottish Asylums (*British Medical Journal*, December 3, 1921), but the objections raised against his conclusions by Dr. Murry, of the Imperial Cancer Research Fund, seem to me entirely conclusive. I have likewise considered the argument on microorganisms in cancer, advanced by Dr. J. Young (*Edinburgh Med. Jour.* October, 1921), and while entitled to serious consideration, I, for one, can not but feel that the case of cancer causation remains as before, an unsolved and possibly an unsolvable mystery of medical and biological science. I may recall, however, the statement made by me in my "Mortality from Cancer Throughout the World," that there is not on record a single case of cancer infection on the part of a surgeon, or an attending nurse, in cancer cases, which I feel is the most convincing proof opposed to the theory of cancer being an infection disease in the accepted sense of the term.

Quite similar is the equally perplexing question of cancer houses and cancer

streets. One of the recent arguments contributed to this controversy, by Dr. J. P. Wightman, of Scalby, Yorkshire, England (*British Med. Jour.*, November 12, 1921) contains the story of a so-called 'cancer-house' which had been demolished by a healthy farmer, who soon thereafter developed cancer of the intestines, from which he died. His housekeeper, according to Dr. Wightman, "who took his meals to him and who probably spent some time in the dust and lime, developed cancer of the breast." To draw far-reaching conclusions from such a slender basis of information is of itself unworthy as evidence in matters of medical controversy. The Doctor in question goes on to say that his mother had lived in an old house for many years, in which she died of cancer of the liver, while ten years later a lady living in the same house developed cancer of the intestines. This is not evidence but merely speculative guesswork. A theory of pure coincidence would readily explain the occurrence of cancer in the same house, considering the frequency with which cancer occurs among old people. But it should be evident to anyone familiar with the theory of germ diseases that the same germ would not be likely to produce the different forms of cancer as are here reported.

For the practical objective of cancer control at the present time it serves no useful purpose to enlarge upon the speculations concerning cancer causation. However interesting and attractive the question may be, and however far-reaching the effects of ultimate discoveries or conclusions, for the time being, and for many years to come the major problem will concern the cancer patients, and the best and perhaps the only means by which life may be prolonged for a number of years. It is far more important to ascertain why Indians or Japanese women do not suffer from cancer of the breast, or why cancer of the stomach and the intestines is nearly absent among the males of native races, than to speculate up-

on involved hypotheses based upon animal experimentation. For if the negative evidence is rightly applied we may possibly arrive at sound conclusions concerning cancer prevention, altho the problem of cancer causation remains an unsolved mystery of biological science.

It is difficult to understand why no emphasis is placed upon the probable injuriousness of corset wearing, lacing, and stays as a causative factor in cancer of the breast, when the evidence is overwhelming that this deplorable affection causes an annual loss of probably not much less than ten thousand lives of mature women in this country. If, as is possible, the eating of over-heated food is an irritant responsible, in part at least, for cancer of the stomach, as suggested by Dr. William J. Mayo, the cause of cancer prevention is brought immeasurably nearer to a solution by heeding the advice given on the part of one who can not be accused of rash statements or superficial generalization. Whether it is true or not, there is certainly much plausible proof in the statement that the Chinese males suffer from cancer of the stomach and the esophagus because of the habit of eating hot rice; while Chinese women, who eat rice after their husbands, in a cool condition, do not suffer in a similar manner. Dr. L. Duncan Bulkeley has not improperly referred to cancer as a mutiny of body cells. Any injury or traumatism or abnormal bodily condition results in an irritation, which is practically a condition precedent to cancer occurrence. Dr. Bulkeley draws a parallel of mutiny on the part of soldiers or sailors forced to eat unsuitable food, or to live under unsuitable conditions, while likewise normal cells brought into an aberrant condition of body abnormalities may account for the origin of cancer occurrence, since the disease is invariably, at the outset, a local disturbance which gradually develops until finally it spreads, through metastasis, to every part of the body. Of course the introduction of local irritants in

to the body is one of great complexity, precluding the probability that cancer is due to a single cause, but it is much more likely that a number of causes operate in combination to bring about the cancerous condition which, remaining unchecked or uncontrolled, inevitably leads to death. Perhaps the most interesting results in this respect, and as to which as yet little is known, are investigations originated by Dr. C. E. Green, of Edinborough, continued by Dr. Georgine Luden, of the Mayo Clinic, and brought near a conclusion by Dr. Jerome Meyers, under the direction of Dr. Royal S. Copeland, Commissioner of Health of New York City. These investigations concern the effect of coal smoke, or smoke and fumes of other kinds, on the health of individuals, particularly as regards a predisposition to malignant diseases. I am not in a position to give expression to the final findings of these investigations further than to say that they are distinctly hopeful of practical results. In Rochester, Minn., Dr. Luden's investigations would seem to show a decided effect of coal smoke as a causative factor in cancer occurrences, while likewise the investigations of Green support a similar theory suggestive of smoke prevention and the control of certain atmospheric irritants as yet but imperfectly known. I may, however, briefly refer to the New York investigations, the results of which have not as yet been made public but which were limited, at my suggestion, to Richmond Borough, or Staten Island, where the conditions for such an investigation were practically ideal. That investigation covers the period 1914-1920, including some four hundred cancer deaths. The general indications are that areas subject to atmospheric irritants suffer a clearly traceable excess in the local cancer death rate over areas more favorably situated.

Granting that the cancer problem in the lower South is happily as yet some distance from having reached the serious significance common to northern and western

states, as best illustrated by the fact that the cancer death rate for the persons forty years of age and over is 34.9 per 10,000 for Massachusetts, while only 18.5 for the State of North Carolina, and 16.5 for South Carolina, the disease nevertheless demands the concentrated attention of the Southern medical profession and the public, if only on humanitarian grounds, which insist that every life and every year of life possible should be saved or conserved to the community as a rightful asset to the State. Cancer, as is well known, affects every part or portion of the body but chiefly in order of importance the stomach and liver, the female generative organs, the breast, the peritoneum, intestines and rectum, the skin, and the mouth or buccal cavity. The mortality falls with crushing weight upon women, cancer being more common in the ovaries and the breast among the unmarried while more common in the uterus among those who have been married and have had children. The hope of a cure affects practically every form of cancer provided prompt attention is given to the earliest indication of the disease. Unfortunately, cancer in its origin is almost painless, and small lumps or white patches, or other indications, are frequently ignored as of no account. The principle may be laid down that every abnormality should require prompt and qualified attention, and no patient should be satisfied with a doctor's opinion indicative of a complacent attitude suggesting delay.

I would be the last to arouse unnecessary apprehension leading to "cancerphobia", as has often been the case in tuberculosis, leading to phthisiophobia, but the disease is of such frightful consequences to those who are affected that it would seem of the essence of cruelty to give the benefit of a doubt to those who may have cancer, while the consequences of delay fall most heavily on the innocent victims of an unjustifiable optimism. I would say frankly that a considerable amount of unnecessary operation

or cauterization would be preferable to the many needless deaths resulting from apathy or fear. Far better to submit to an operation while there is a chance than to await the unavoidable outcome of an operation in an inoperable stage as a last resort. The discouraging statistics of modern hospitals as regards cancer operations are entirely attributal to the needless delay, frequently amounting to one, two, or three years, when the earlier chances of success were all in favor of the patients.

It is, unhappily, true that facilities are wanting in many sections, particularly of the rural South, where qualified surgical or radiological service can not be had; but to an increasing extent the omission is made good and southern surgeons are forging to the front as never before, disclosing most encouraging evidence of surgical practice comparable with the best work done anywhere in the world. The hospital service of large southern cities at least is constantly being improved, and it is a deserved tribute to the fairness and humanity of the southern people to bear witness to the fact that the treatment extended to the colored race, irrespective of its poverty, is precisely the same as that extended to the white race. The fatality rate, for illustration, in tumor operations in the Charity Hospital of New Orleans is about the same for both races.

In conclusion, I wish to re-emphasize the urgency of the tumor problem as it affects the negro woman of the South. The differences in the frequency rates of both malignant and benign tumors of the generative organs are as extraordinary as the non-occurrence of breast cancer among the women of primitive races. For illustration, the ratio of adults admissions per 10,000 patients to the New Orleans Charity Hospital on account of malignant tumors of the uterus was 145 for white females against 180 for colored females. For benign tumors of the uterus the admission rate was 99 for white females and 708 for colored females. Of all tumors treated in the New Orleans

Charity Hospital the proportion of tumors of the uterus was 72 per cent for white females and 89 per cent for colored females. The latter suffer less from both benign and malignant tumors of the ovaries. There is rather a marked excess in the occurrence of benign tumors of the ligaments in the case of colored women, while the proportion of admissions on account of benign tumors of the vagina are practically the same.

It would be extremely useful to determine the underlying reasons for the extraordinary frequency of uterine fibroids in the case of negro women. It is regrettable that the literature of malignant disease in the South, with due regards to race, should be a mere fragment of what necessity demands. Likewise in the case of the white population, it would be of the utmost value to make further investigations into the possible causative relation of gastric ulcers to cancers of the stomach. There are those who maintain emphatically that a causal connection exists in a measurable number of cases, where others are equally emphatic in their opinion that gastric ulcer is rarely followed by malignant disease. While much may be done in this direction by the average physician and surgeon, obviously the best work is possible only in cancer hospitals or in wards devoted exclusively to cancer cases. It is most gratifying to note that according to a recent action taken jointly by the hospitals and charity committees of the city of Atlanta, Ga., the proposed cancer hospital and clinic at Grady Hospital will be made possible by a bequest of \$500,000 by the late Albert Steiner. This will include radium and roentgen-ray furnishings, at a cost of \$150,000. An expert will be employed to take charge of the cancer ward, which is decidedly preferable to the treatment of cancer patients as matter of routine practice without segregation. It is properly pointed out in the Journal of the American Medical Association that, "this action will make Grady the first hospital south of Baltimore to be especially equipped

for the treatment of cancer." What has been done for Atlanta requires to be done for other central sections of the South, and certainly for Charleston and Savannah.

I may properly re-emphasize also the warnings uttered by practically everyone who speaks with authority on the cancer problem, that there is the most serious menace to cancer patients in yielding to allurements of advertised so-called "cancer cures." The very multiplicity of such cures, and the general ignorance of those who offer them, the excessive charges made for the service rendered, and the methods employed in gaining publicity or notoriety, all bear witness to the truth that such 'cures' are merely money making efforts and often deliberately intended to defraud the public first of money and then of life. It is a disgrace that cancer cures should continue to be advertised and that the public should continue to be misled, most of all the unfortunate victims who reside in remote rural sections where qualified advice is often difficult, if not impossible, to be had.

The control of cancer is feasible, but it requires the full and sympathetic cooperation of the medical profession and the general public. Every doctor can and must help to educate the people, while, conversely, every layman owes it to himself and to those dear or near to him to gain a reasonable degree of familiarity with cancer facts. Cancer, as far as known, is invariably the result of a local irritation, suggesting the avoidance of any and all irritants, and care and precaution in the case of all injuries which may possibly terminate in malignant development. *Cancer control means the prevention of death from cancer and the prolongation of human life.* It does not mean the *prevention of cancer*, which, in the light of our present knowledge and understanding of the disease, lies beyond human power, ingenuity, or skill. Cancer education must be continuous to be effective, and the doctrine must be preached, in season and out, that in the earliest recognition and skillful radical treatment of the disease lies the only hope of a cure.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

THE RELATION OF FOCI OF INFECTIONS TO INFECTIONS OF THE KIDNEY.

Infections of the kidney occur daily. Even, excluding the very common conditions of pyelitis of children and pregnancy, we see daily various types of renal infection in both men and women. We are constantly differentiating these conditions from acute and chronic appendicitis, gall stones, and other intra-abdominal lesions. It is not difficult to distinguish them from malarial fever, with which they are sometimes confused. Proper examination will easily clear up the diagnosis.

So then, especially, on account of the great frequency of renal infections, we are necessarily interested in their modes of infection. Bacteria may pass through the kidney without producing any pathological change. Evidence to this effect is conclusive. On the other hand, bacteria arriving in the kidney tissue frequently set up pathological changes, from slight to serious lesions. Whether or not they produce a pathological condition, they reach the organ in the same manner.

The infections commonly met with are pyelitis, pyelonephritis, pyonephrosis, suppurative nephritis, cortical abscesses, infected hydronephrosis, and perinephritic abscess.

The organisms commonly met with are the colon bacillus, staphylococcus aureus and albus, streptococci; infrequently, bacillus pyocyaneus and proteus. The colon bacillus is present in about 90 per cent of the cases, either alone or in association with one of the cocci group. The cocci are usually the pus producing organisms.

The focus of infection may be in any tissue of the body, such as antrum frontal sinus, ear, teeth, prostate, gall-bladder, appendix, infected hemorrhoid, ovary, fallopian tube, gastric and duodenal ulcers, furuncle, etc. There may be more than one focus in the same case. When a focus of infection is removed, the renal infection may remain and itself become a primary focus.

The great majority of kidney infections, if not practically all, are hematogenous in origin. Even an infection induced by and grafted on a calculus draws its organisms from a focus through the blood stream. Therefore, we should not neglect to rid the patient of any foci even if a stone should be removed from the kidney. The possible ways of infection other than the blood stream are ascending, by continuity from some infection lower down in the urinary tract; lymphatic; extension from some infected tissue bordering on the kidney. The organisms commonly causing the infection have been frequently demonstrated by cultures in the blood stream. The colon bacillus, the most common organism associated with renal infection, can be found in the blood in some cases of pyelitis, pyelonephritis, and other infections of the kidney. The cocci have been likewise found in the blood. Bumpus and Meisser have in some very illuminating experiments shown the selective localization of certain organisms for the kidney and bladder obtained from apical abscesses of teeth. They have inoculated rabbits with primary cultures of bacteria obtained from the teeth of patients having infections of the kidney and bladder and caused lesions in similar tissues of the animal. The organisms were then re-

covered in pure culture from the renal lesion of the animal and reinjected into other rabbits, which developed lesions in the kidney. Clinically, renal infections sometimes improve and clear up after removing some focus from the teeth, tonsils, prostate, etc.

It would be unreasonable to expect an ascending infection except under certain specific conditions such as prostatic obstruction, vesical diverticulum, etc. These conditions, however, do not obtain except in comparatively few renal infections. Besides, the majority of renal infections occur in women, while they are also very common in men. It would also be unreasonable to expect renal infection of ascending origin where there is a normal peristalsis of the ureter and with the continual flow of urine through it. Ascending infection may possibly occur, though not often. At one time it was thought to be the most frequent mode of infection.

Though there has been demonstrated to the satisfaction of some observers lymphatic connection between the colon and kidney, also between the bladder, ureter and the kidney, it would not be expected to have an infection to go through many chains of lymph glands often and reach the kidney without producing highly localized lesions of the lymph nodes. Lymphatic infection may occur occasionally, but not often.

Please exclude from the above considerations renal tuberculosis, as it should be dealt with alone.

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SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

ANAESTHESIA ADMINISTERED EXPERTLY.

Frequently, articles appear in medical periodicals, from the pen of some one more rhetorically than anaesthetically inclined, stating the absurdity and impossibility of an anaesthesia being expertly administered, except by a full fledged and legalized Doctor of Medicine.

These writers state that no one should attempt an anaesthesia who has not spent four years in attendance at a medical school where they were saturated with histology, physiology, anatomy, chemistry, materia medica, and pathology.

They write in furtherance of their argument that, none other than a doctor, is in a position to determine whether or not an anaesthetic may be taken by a patient, and unless one is qualified to give an expert opinion regarding the patient's risk towards it, that that same person is not qualified to administer the anaesthesia.

With the first part of this statement we concur, with the latter part we do not.

Some of the expert anaesthetists to be found, are women who graduated as nurses and not as doctors and the writer knows a number of our best surgeons who use them exclusively.

They have the temperament so necessary to every anaesthetist in the early stages of

an expert anaesthesia, and they are much more inclined to be interested in the patient's condition and much less inclined to be interested in the particular way that the surgeon is performing some difficult operative procedure. They are prone to be more interested in the administration of the anaesthetic, and less inclined to be interested in the possible chemical and physiological changes taking place in the body tissues.

All that is expected of a skillful anaesthetist, from a practical stand point, is to carry the patient safely through.

We have been told that up until a few months ago, the best anaesthetist in the State of California was a woman and that her services were so much in demand, that certain doctors banded themselves together and succeeded in getting the legislature of that great state to prohibit the administration of ether, gas, or chloroform, except by a graduate of medicine. She was barred, by law, and in all probability, no one of those seeking her downfall, was comparable with her, in the work she had chosen and perfected herself in.

We do not wish to say one word or utter a single protest against the administration of an anaesthetic by a doctor, but we do wish to decry the statement that no one other than a doctor is qualified to do the same.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

THE THERAPEUTIC USE OF OXYGEN.

In the American Journal of the Medical Sciences, for July, 1920, Dr. R. D. Rudolf, of Toronto, Canada, under the above title, wrote a most interesting, valuable, and instructive article.

We have all seen Oxygen inhalation used as a late resort in the cyanotic states, especially in pneumonias, and most of us have justly discarded it as being no good in relieving the condition.

After careful and repeated study of this article by Dr. Rudolf your faith in oxygen will be restored because it shows clearly why it has heretofore failed us, and we learn when and how to administer it, and just how it does the work.

I feel that every doctor will, if he hasn't already read the article, be very glad of the slight trouble and expense incurred in securing a copy, the following extract of which is only a sketchy review to attract your attention.

The physiology of respiration, and of the oxygen carrying and storing properties of the blood are clearly stated. It shows how the hemoglobin absorbs oxygen to the point of near saturation and delivers it to the blood plasma which, in turn, delivers it to the tissues as needed.

It shows that while we cannot increase

the hemoglobin-oxygen, and can increase the plasma-oxygen several hundred per cent under proper technique of administration, and that our usual method of administration by a funnel held in front of the patient's face has been only a waste of good oxygen, a loss of valuable time, and a possible sacrifice of the patient's life. It explains the causes of anoxemia, and how vital nervous and circulatory tissues become devitalized by allowing cyanosis to continue beyond a given time so that these tissues cannot be revitalized even though oxygen is then given. It explains the necessity of early administration to save life. It explains two types of cyanosis and shows in which type venesection is indicated before oxygen can help. It explains the dyspnoea of high altitudes and that of respiratory disease. Best of all it gives a very simple method of administering oxygen, that any doctor can use successfully, and shows how it brings about the results for which we have heretofore looked in vain, and in a way that convinces one of its value.

Altogether I consider this one of the most interesting and most valuable medical articles that I have ever read.

Some fifteen years ago I had a small portable machine, about the size of a quart thermos bottle, and not heavy or bulky, which generated pure oxygen at slight cost. I will endeavor to give data on this machine in the next issue of the Journal.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

PROGNOSIS FACTORS IN BRONCHIAL ASTHMA.

In South Carolina 1.2 men out of every 1,000 of the first million draft recruits had asthma. The grand total for the United States in the same tabulation showed .63 per 1,000 recruits. (1) It is not surprising therefore in civil practice to find many sufferers from this disease in this state. What is the out look for the asthmatic?

Generally speaking, the age of onset and duration of the disease has little to do with the prognosis in sensitive cases. That is in the cases where the cutaneous reactions are positive to one or more of the offending protein. Here the prognosis is good for cure. In the group of cases where the skin fails to react and the history does not show clearly what general class of proteins the patient is sensitive to, the out-look is only fair, since the treatment is from necessity non specific. One would be safe in saying that in at least fifty per cent of all cases the specific cause can be found by cutaneous tests.

When the elastic tissue has broken down and emphysema has resulted the out look

is poor. In chronic Bronchitis of long duration the chances for recovery are poor. Lastly where the integrity of the myocardium is impaired and the sufferer becomes dyspnoeic on slight exertion the chances for recovery are indeed poor.

It appears then from the above that cases where the specific cause or causes can be found the out look is good—where the specific causes cannot be found the prognosis is at best problematic—where anatomical changes have taken place in the elasticity of the lungs or the myocardium impaired the out-look is also poor.

On the whole the asthmatic has a far better outlook today than ever before and should be encouraged to have the exact cause found wherever possible and specific desensitization instituted.

It may not be possible for every Physician who sees a given case of Asthma to be able to conduct the necessary cutaneous study. However, it is little trouble for every Physician to carry out the desensitization at home when the case has been well worked up by persons particularly interested and equipped for such study. (1). War dpt: Surgeon General Bul. No. 11, March, 1919-p. 147.

NERVOUS AND MENTAL DISEASES

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NERVOUS AND MENTAL DISEASES PRACTICAL PSYCHOLOGY VERSUS "ISMS".

The practice of psychotherapeutic treatment of nervous diseases seems to have arisen in response to a demand. Mesmer, in the eighteenth century, attracted a large following, because he was shrewd enough to give the people what they thought they wanted.

During the past half-century we have seen numerous schools of psychotherapy come into being, under such names as Christian Science, New Thought, Divine Healing, Faith Cure and others. The leaders of these various cults include some who were undoubtedly insane, some infamous perpetrators of the most preposterous fraud, and a few serious philosophical students who sincerely believed what they have attempted to teach. Their followers are counted in numbers of seven figures, and range all the way from the ignorant and easily duped to persons of collegiate training who are interested in literary rather than scientific pursuits. The interest of the people in anything that claims relief from suffering is indicated by the throngs which gather in a public meeting place to hear the leader of the "newest school".

The benefit resulting from psychic treatment is so grossly exaggerated by the followers of the cult that we in our disgust turn our backs upon some opportunities to practice it more wisely and scientifically than our unscrupulous competitors. We often see patients come out whole after being attended by the charlatans for the simple reason that they had never been ill, and we see others succumb later to diseases of

which they claim to have been cured. But after making liberal allowance for real cures of imaginary disease and imaginary cures of real disease, the unbiased student of these movements is probably forced to acknowledge that it has a place in the scientific practice of medicine, and what we desire is to see it in the hands of regular graduated physicians who understand better than any one else the coordination of mind and body.

We expect medicine to assist in healing man's body, law to look after his social relationships, religion the care of his soul, and we have yet the mind to govern. The testimonials of cure by the use of some worthless patent medicine must be credited to the mental effort upon a suggestible patient, and yet they continue to multiply.

While the popular interest in mental therapeutics is due in part to ignorance of science, some of it must be attributed to a sincere groping after the truth. We as physicians have something to learn from the misguided teachers who are trying to satisfy this longing in the wrong way. We should interest ourselves in the minds of our patients, as well as their bodies, and endeavor to teach them how to cultivate a healthy frame of mind. Without attempting to solve the metaphysical problem of the relation between mind and body, we all recognize that some such relationship exists, and that a healthy state of mind is conducive to physical health. We ought to be able to give our patients something a little nearer the truth than they can receive from blind leaders of the blind, and at least we shall give them information that may serve to protect them against unscrupulous practitioners who live by preying upon the credulity of ignorant and ill advised persons.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

THE PREVENTION OF DIPHTHERIA

With the discovery of Diphtheria Antitoxin in 1895, it was thought by medical observers that the closing chapters of this disease would soon be written. Its use however, while having been instrumental in reducing the mortality rate to a marked extent, has proven a disappointment to those who had hoped to see either a total elimination, or at least a marked decrease in the number of cases of Diphtheria occurring each year.

The reason for this failure lies in the fact that Antitoxin is prepared with horse serum—a protein substance foreign to the human body—which is quickly eliminated from the system, and which therefore confers a passive immunity for a very brief period only.

Park and Zingher, with their associates have done considerable work investigating the relative susceptibility of persons to diphtheria, and found with the aid of the Diphtheria-toxin Skin test devised by Schick, that while only about 12 per cent of adults are susceptible to Diphtheria, young children are especially liable to contract diphtheria. In fact, they found that with the exception of infants under 6 months of age who seem to possess a relative immunity, the younger the child, the greater is its chance of contracting the disease; and about 60 per cent of the children examined between the ages of 1 and 3 years showed an absence of immunity.

These workers in following up the inves-

tigations noted above have done a considerable amount of work in producing active immunity in individuals found to be susceptible to Diphtheria, with the use of a Toxin-antitoxin mixture. A very small quantity (about 4 units) of Antitoxin is used to neutralize the dose of toxin, which without this neutralization would not be entirely free from danger in using, inasmuch as each c. c. (the usual amount injected) contains approximately 400 times the fatal dose of toxin for a half grown guinea pig.

The immunity following this treatment, which consists of three consecutive doses at weekly intervals, appears to be a lasting one, and high hopes are being entertained that a life-time immunity may be established through these inoculations.

The results following the use of Toxin-Antitoxin mixture have been so highly satisfactory—as evidenced by follow up Schick tests—that Health Departments everywhere are beginning to recommend and use these inoculations.

That South Carolina is not lagging in this modern immunity work, is demonstrated by the fact that the Charleston County Health Department administered more than 1700 doses of Toxin-Antitoxin during the past month, and we understand that Greenville County is about to commence this important work.

Should the results of Toxin-Antitoxin immunization come up to the expectations of its introducers, we may cheerfully hope that the time will come when Diphtheria—the dreaded strangler of children—will be relegated to our list of unknown diseases.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
Medical College of the State of South Carolina,
Charleston, S. C.

ARTERIOSCLEROSIS

Arteriosclerosis is a term so frequently used that it has been necessary to invent a phrase which will, in a general way, give to the lay mind the idea of the underlying end condition present in this disease. "Hardening of the arteries" is commonly used by the laity to convey the same idea that physicians convey to one another by the use of the term arteriosclerosis. And the common use of the phrase "hardening of the arteries" by the laity has led members of the profession into thinking of arteriosclerosis as a hardening of the arteries, without a consideration of the agencies at work in producing this condition.

Arteriosclerosis is a degenerative and inflammatory disease of the arterial system. No part of the arterial system is immune from its attack. It is essentially a disease of the last half of life, but persons in middle life also suffer occasionally. The early occurrence of the disease or the more extreme grades of its severity are dependent on a variety of causes, among which certain chronic intoxications—namely, gout, syphilis, chronic nephritis, and chronic alcoholism—are prominent. Muscular exertion, certain cachectic states, improper diet, and chronic intestinal intoxication are other factors favorable to its production. There is a general tendency to name high blood pressure as another causative agent, but it is impossible to ascribe to it a primary role, for, with arteriosclerosis, are so frequently combined other lesions, the cause of or incident to increased pressure—cardiac and renal disease.

Authorities have differed widely in regard to the method of operation of the causes of

arteriosclerosis. Previously it was held that the causative agencies directly irritated the intimal lining of the blood vessels and caused inflammatory reactions with production of new tissue. At present, it is apparently established that degenerative changes and loss of elasticity in the vessel walls are the result of the action of the causative agents, and that the hyperplasia in the various coats of the vessel is an effort at repair of the damage done. For example, in cases occurring in old age—the first change noted is a loss of elasticity of the vessel wall with subsequent over-dilatation. Following this, hyperplasia of the intima takes place and thus an effort is made to return the vessel lumen to its normal diameter. The hyperplasia is, in fact, a proliferation of the intimal tissues, a fibrosis of the elastic laminae and degeneration in the media. In most forms the newly proliferated tissue in the intima undergoes degeneration while the media is replaced by functionally inactive fibrous tissue.

Arteriosclerosis may be a diffuse process, or it may be circumscribed or nodular. In the former, the arterial tree is more or less uniformly affected. In the case of the nodular type, which is most common in the aorta and large vessels, there are seen on the intima of the vessel circumscribed or nodular elevations that vary much in size and have a greyish or white color. Later when degenerative changes have occurred, the nodule becomes a faint or distinct yellowish color, and finally calcareous deposits may render it stone-like and gritty. Again, the nodule may completely degenerate, soften and ulcerate and then calcific deposits may occur. These areas may be few in number and widely separated. On the other hand, they may be so numerous as to

merge, one into the other, thus involving practically all of the intima.

Diffuse arteriosclerosis is especially frequent in old age, and most often involves the smaller vessels. Sometimes it is associated with the nodular form.

In smaller vessels, the process in the intima may be so extensive as to practically

obliterate the lumen (endarteritis obliterans). In the aorta and in some of the larger branches the loss of elasticity resulting from the development of fibrous tissue and subsequent degenerations leads to gradual formation of diffuse arterial ecstasia or localized aneurysmal sacs. Not infrequently the weakening and dilation result in spontaneous rupture of the vessel.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

RING WORM INFECTION

The recent literature on the various forms of ring worm infection of the body shows that this condition includes a wide field of Dermatoses that were formerly classed under a separate and distinct classification. These new departures have caused some confusion as to just where we stand in the matter of ring worm infection. For reference three or four articles are listed below for the information of any one who would like to look further into the subject.

To the average physician ring worm infection only brings to mind three conditions, tinea tonsurans, tinea sycosis, and tinea circinata. Tinea tonsurans is fairly well known as ring worm of the scalp and that the condition is confined to children under 12 years of age. It is practically unknown in the adult. Tinea sycosis commonly called "barbers itch" is a ring worm infection of the beard and therefore confined to the adult male. It is a very chronic condition, lasting some times for years. Tinea circinata or eczema marginatum is the term usually applied to ring worm infection of the nonhairy parts of the body. Under this heading we might classify tinea cruris, ring worm of the groin which is of the nonhairy region, and is, in most instances due to the same organism the epidermophyton ingui-

nale. This was for some time the only organism found in these conditions, and the common name for these ring worm infections about the hands and feet especially, was "dhobie itch".

The advances made then, in the study of ring worm infection might be classed under the head of tinea circinata. Sabouraud first described this condition and its associated lesions in 1860, since that time the subject has grown to include many of the conditions that were formerly called eczemas of the various type. The majority of these eruptions which have been found to be ring worm are of the hands and feet, and the best classification so far divides the conditions into three types. The first class characterized by the production of callus with more or less scaling, The second class characterized by maceration of skin between the toes. The third type is characterized by an eruption, occurring on the sole, the side of the foot near the sole, and especially on the hollow of the instep. In all of these conditions we have an almost complete absence of the typical ring formations which is a radical departure from our former ideas about the ring worm infections.

In the treatment of these conditions we must remember that all dermatoses of the hands and feet are not due to mycotic infection. This is a very important point for

the treatment which is the most efficacious for the mycotic infections will in each instance make the other conditions worse. One can readily see from the above that the first thing of importance is to make an accurate diagnosis. It seems that all authorities agree that the best method is a microscopic examination of the scrapings from the involved areas. The scrapings should be selected from the most acute areas. If the physician is unable to make the examination himself he can collect the scrapings place them on a slide and send them to some one competent to do such work. The material will keep indefinitely. Mitchell reports a culture of epidermophyton inguinale from tissue that had

been brought to a boiling point in 15 per cent sodium hydroxide. He further states that he believes it possible to culture the organism from socks that have been laundered. Such a demonstration would explain many of the difficulties that we have in successfully treating these conditions.

LITERATURE.

The diagnosis of some eruptions on the hands and feet. Chas. H. Williams Archives of Dermatology and Syphilology February 1922.

Further studies on ring worm of the hands and feet. J. H. Mitchell same as above.

EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

RELATION OF NASAL DISEASE TO HEADACHE.

The following nasal conditions may be the cause of headache: Swelling of the mucosa with pressure or irritation of the nerves; direct contact of the swollen mucosa; stasis following obstruction of the drainage passages; negative pressure in the sinusses; abnormal anatomical conditions, such as deviation of septum; re-absorption of toxins formed within the sinusses; ulceration of the mucosa with involvement of the nerves; any condition which causes active congestion of the cranial circulation.

Facial neuralgia and migraine are often due to disease within the nasal accessory sinusses. Headache in the supraorbital re-

gion with superficial tenderness is usually due to pressure from hypertrophy of the turbinate. Headache in acute frontal sinusitis is present from the very beginning of the disease, first over the affected sinus, later in the vertex, temporal, or occipital regions. In anterior ethmoid disease there is pain between the eyes; when behind the eyes and nose the posterior ethmoid may be involved. The headache in sphenoidal disease is most excruciating within the head and through the temple or occipital region.

Headaches of nasal origin are frequently mistaken for eye strain and refraction in these cases are very unsatisfactory, and not until the nasal condition is corrected are the headaches relieved and glasses accepted, and frequently glasses will not be needed.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

HYPER-THYROIDISM.

Since 1898, about the time that X-Ray machines were manufactured in a suitable form for medical purposes, workers have been treating hyper-thyroidism with more or less encouraging results. In the early days the mechanical limitations of these machines were manifold; technique was entirely unknown, and it was not until 1916 that we began to get a mass of statistics that could mean something. Then came Basal Metabolism to check any method used in the treatment of hyper-thyroidism.

With the present day technique, our precise methods of diagnosis, and a careful selection of cases, radiant energy is worthy of trial in almost all cases of hyper-thyroidism, because of the fact that should this method prove a failure, as it may in a small percentage of cases, the patient still has operative interference to fall back on in need. And the consensus of opinion among Roentgenologists and Radium therapists is that irradiation increases operative difficulties very little. Indeed some operators even claim that it is possible to do an almost bloodless operation after a long continued irradiation, due to a very marked increase of the fibrous tissue in the gland. Holmes, Tyler, Pfahler, Allison and others conclude that in the majority of cases treated by the X-Ray you can promise a prompt improvement in the well-being of the patient, a reduction in the pulse rate, and a marked fall in the Basal Metabolism. Loukes uses

Radium entirely, and concludes that systolic blood pressure is lowered, and that the metabolic rate is lowered for the first two weeks, raised for the third and fourth, and then gradually reduced for the next few months. The metabolic rate was found to be normal in many very active cases three months after treatment.

Statistics that are now available from reliable workers are based on thousands of cases, and in certain sections of the United States, in certain hospitals, hyper-thyroidism is no longer considered a surgical disease until radium and X-Ray are given a thorough tryout.

One other distinct advantage of irradiation over operative interference in extreme toxic cases that patients do not develop a sudden fatal toxemia, as they often do after the handling of the gland at operation.

The technique for treatment of hyper-thyroidism is very exacting, and treatment should only be applied by a thoroughly competent Roentgenotherapist, or an expert in radium therapy, as the possibility for harm is almost as great when applied by an inexperienced or poorly equipped operator as when an operation is performed by a mediocre surgeon. Irradiation will fail occasionally just as surgery fails in a great many instances. The author has in mind three cases now which had a post-operative recurrence of hyper-thyroidism; one was operated upon once, a second twice, while the third had undergone operation three times. Each one is showing a marked improvement under irradiation.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

Antiseptics in Obstetrics:—Bichloride in various dilutions is probably the favorite "antiseptic" for the hands and the vulva before and after delivery. Properly used, bichloride or one of the phenol group—creoline or lysol—have certain germicidal qualities; that is, in a dilution of 1 to 1000, bichloride is reliable if there are no albuminous materials on the object to be immersed in it and the immersion is continued for a full, "clocked" minute. The danger of all such solutions is that one becomes careless in their use or hurried and a dip in them is relied upon.

If an attendant knows that after washing the hands, they will be dipped in some solution, less care is given to the scrubbing than otherwise would be. If they are to be rinsed in sterile water only, the scrubbing at the sink is apt to be thorough. Or again the sterile hand touches some unsterile object—a dip in bichloride, like a libation to the god of asepsis, is supposed to make all safe: Immersion of the hand for a full minute in 1 to 1000 bichloride would be quite satisfactory if it were done. If a placating dip is all the hand is to have I would prefer resterilization.

Similarly with the vulva. Before labor, if the hair be shaved off with a safety razor and the upper thighs, lower abdomen and vulva are thoroughly scrubbed with plenty of water and soap, the addition of an antiseptic solution seldom does any harm. Under the same complete laundrying however,

I believe the bichloride bath is unnecessary and I do not use it as I do not want the nurse to skimp the scrubbing or to be inclined myself to depend on the chemical cleansing.

Many firms have put liquid "surgical" soap on the market in convenient containers. By actual test many of them have less antiseptic value than the liquid "green soap" of the pharmacopeia and are not as satisfactory cleansing agents as ordinary yellow laundry soap. In our work, obstetrical and gynecological, we find that green soap and running water are all that are necessary for the hand preparation, and the preparation of the vulva.

Where the cost of the green soap is to be considered or where it is not available, a very satisfactory and sterile liquid soap that is not irritating, can be made by cutting castile soap into small pieces, dissolving in water by boiling, and kept in a corked bottle. This can be used for scrubbing and as a sterile lubricant as well.

To summarize. We believe that scrubbing with soap and water is sufficient for the shaved vulva. That a stiff nail-brush, a nail-file, running water and soap and a will to cleanliness are all that are necessary for the hands. Fifteen minutes hard boiling suffices for the instruments and sutures. Gloves that have been washed clean first can be sterilized by boiling three minutes. Plenty of water that has boiled is our stand-by solution for parts, instruments and hands. Rigid cleanliness will do more to prevent infection than poisons.

SOCIETY REPORTS

GREENWOOD COUNTY.

Date of Meeting February 6, 1922, President J. B. Workman in chair. Roll call, number present 9, number on roll 22. Minutes read and approved. Dr. J. L. Marshall read a paper on Pleurisy, which was discussed by Drs. Blake and Harrison.

Dr. S. W. Page reported an unusual and interesting case—that of an apparently normal new born baby which developed clinical symptoms, demanding an operation. Baby died about third or fourth day. Postmortem showed the absence of intestines from a point a few inches below stomach to within a few inches of the anus, being represented only by a hard atrophied tube of very small calibre.

Dr. J. D. Harrison reported an interesting case of a female patient who did not secrete a drop of urine in 19 days, being proven by catheterization each day.

Other interesting cases were reported and all discussed freely.

J. L. MARSHALL, *Secretary*

ORANGEBURG COUNTY.

Date of meeting February 9, 1922, President C. I. Green in chair. Roll call, number present 19; number on roll 21. Minutes read and approved. The subject of Focal Infection was discussed. Papers were presented by the following: Tonsils as a foci of infection, by Dr. W. J. Lowman. Teeth as a foci of infection, by Dr. W. K. Walker, a dentist. Gastro-Intestinal tract as a focus of infection, by Dr. Vance Brabham. Accessory sinuses as foci of infection, by Dr. G. W. Truluck. Focal infection from a surgical standpoint, by Dr. C. A. Mobley. Effects of Focal infection on the general constitution, by Dr. A. L. Black.

Dr. B. G. Barrentine, Genito-Urinary Tract as a focus of infection. Dr. C. W. Morrison, Effects of Focal Infection on the Heart.

The meeting was well attended. All present joined in a general discussion of the papers presented and many interesting cases were reported.

After the meeting dinner was served at the Orangeburg Hotel.

Our next meeting will be in Orangeburg, S. C., at 4 P. M. March 9, 1922.

G. W. TRULUCK, *Secretary*.

SUMTER COUNTY.

Date of meeting February 9, 1922. President C. B. Epps in chair. Roll call, number present 14; number on roll 24. Minutes read and approved. The following papers were read: Repair Vesico-Vaginal Fistula with Clinical Report of Case, by Dr. C. J. Lemmon. Puerperal Infection, by Dr. W. S. Burgess. The papers read were very freely discussed by practically all of the members present. Dr. Lemmon was congratulated for the successful management of the case report. Dr. Burgess was commended for the very careful way in which he handled obstetrical cases. The main point of interest in the doctor's paper was the practice of injecting a dram of turpentine in the abdominal wall of a patient suffering with puerperal sepsis. This injection is said to result in abscess formation which when opened drains freely. The writer of the paper expressed the opinion that the turpentine injection increased the leukocytes and in this way proved beneficial. This treatment to be used only when all other measures have failed.

Under the head of Clinical Cases, Dr. H. A. Mood reported what appears to be an epidemic of nausea and vomiting. Several

physicians made similar reports. It was suggested that this epidemic might be gastric type of influenza. Dr. Shaw reported a case of chickenpox that the profession might be on the lookout for an outbreak of same. Dr. Parler reported what was thought to be a case of "sleeping sickness" in a child. The meeting in March will be devoted to Pediatrics. This was done at the request of the South Carolina Pediatric Society. A communication from the committee on public policy and legislation of the S. C. Medical Association was read for information. The communication called attention to the fact that there was an effort being made to pass a bill through the legislature which would give the Chiropractors a separate board of medical examiners. The communication requested that we confer with our delegation with a view of blocking the passage of said bill. After a very full and free discussion by all members present it was agreed that the best policy to pursue would be to quietly ignore it and let the matter severely alone.

The society adjourned for supper which was very much enjoyed by all.

H. L. SHAW, *Secretary*.

WILLIAMSBURG COUNTY

Date of meeting February 9, 1922. B. M. Montgomery, Secretary, in chair. Roll call, number present 5; number on roll 12. Minutes read and approved.

Dr. T. C. Harper read a paper on Ankylostomiasis. Special reference was made to the prevalence of the infection among children in the locality—based on personal statistics compiled from a series of 240 stool examinations. This paper was discussed by Drs. E. T. Kelly, T. S. Hemingway, and B. M. Montgomery.

Eight clinical cases were presented by Miss Varn, Secretary of the local chapter of the American Red Cross, for physical examination.

In the future this Society shall conduct, in cooperation with the Williamsburg

Chapter of the American Red Cross, a clinic for children, which shall take place on the occasions of the regular monthly sessions of the Society.

B. M. MONTGOMERY, *Secretary*

SPARTANBURG COUNTY

Date of meeting February 24, 1922. President R. H. Fike in chair. Roll call, number present 18; number on roll 65. Minutes read and approved. Dr. J. E. Edwards and Dr. Lesesne Smith discussed papers on Pediatrics—short addresses—"How to put down Chiropractics" and "How a Free Clinic could be successfully formed at Spartanburg County General Hospital" was discussed.

The meeting was very enthusiastic.

N. T. CLARK, *Secretary*.

CHEROKEE COUNTY

Date of meeting February 6, 1922. President J. B. Hughey in chair. Roll call, number present 6; number on roll 8. Minutes read and approved. Dr. Victor Roberts of Blacksburg read a paper on The Early Diagnosis and Treatment of Pellagra. Dr. Roberts stressed the importance of early recognition of pellegra and described in detail the various clinical types it may assume. He emphasized the importance of diet and rest in the treatment of the disease. It was discussed by Drs. J. T. Darwin, S. B. Sherard, R. P. Finney. Dr. J. T. Darwin was designated by the president to read a paper on some Pediatric condition at our next meeting.

RAY P. FINNEY, *Secretary*.

LAURENS COUNTY.

Date of meeting January 23, 1922. President B. O. Whitten in chair. Roll call, number present 5; number on roll 23. Minutes read and approved. The following officers for the ensuing year were elected: President, Dr. W. T. Pace, Gray Court; Vice-President Dr. J. W. Davis, Clinton;

Secretary-Treasurer, Dr. J. W. Beason, Gray Court.

It was moved and seconded that the February meeting be devoted entirely to discussion of Diseases of Childhood. Drs. T. L. W. Bailey and W. D. Ferguson were asked to lead the discussion.

J. W. BEASON, *Secretary*.

PICKENS COUNTY

Date of meeting February 1st; President L. G. Clayton in chair. Roll call, number present 8; number on roll 24. Minutes read and approved. Dr. W. A. Tripp read a paper on Diphtheria, which was discussed by Drs. Fewell of Greenville, Griffin Clayton and Bolt.

Dr. Clayton presented patient with peculiar head pains. No positive diagnosis was made. Dr. Furman presented a case of acute nephritis. Drs. Reeves and Fewell of Greenville were with us and favored us with good talks. Dr. E. W. Griffin of Central was elected a member of our society.

J. L. BOLT, *Secretary*.

NEWBERRY COUNTY

Date of meeting February 24, 1922. Dr. J. M. Kibler in chair. Roll call, number present 15; number on roll 20. Minutes read and approved. Dr. J. J. Watson of Columbia read an interesting paper on Abdominal Pain. A committee of five was appointed to make new Fee Bill.

JOHN K. WICKER, *Secretary*.

LAURENS COUNTY

The Laurens County Medical Society met in regular session on the 4th Monday in February, with unusually large attendance. The welfare of the baby was the topic of discussion, and the main subject was the disordered condition of the bowels in the second summer. The discussion was enter-

ed into by a number present and was very interesting. A unanimous resolution was passed by the members asking for Representatives to maintain our medical practice act, a copy was sent to each Representative. Next meeting will be on the fourth Monday in March.

T. L. W. Bailey, *Correspondent*

COLUMBIA MEDICAL SOCIETY

Date of meeting February 13, 1922. President Floyd D. Rodgers in chair. Number present 36; number on roll 96. Minutes read and approved. The following papers were read: Thoracic Aneurysm with the Report of a Case, by Dr. J. A. Dillard. The discussions were opened by Drs. Heyward Gibbes and F. M. Routh.

Dr. W. A. Boyd reported a case of dislocation of elbow joint with twisted over to outer side and radius to inner side of humerus, X-ray. Dr. J. H. McIntosh scheduled to read a paper on "The Results of Present System of Medical Education," was called out of town and unable to present paper.

JOHN R. BOLING *Secretary*

DORCHESTER COUNTY

Date of meeting February 14, 1922. President A. S. Behling in chair. Roll call, number present 8; number on roll 17. Minutes read and approved. The following papers were read: Mistakes in Diagnosis in treating children, by Dr. R. M. Pollitzer. Infectious Diarrhea, by Dr. W. M. Beach. Perineorrhaphy, by Dr. Chas. Esdorn.

These were discussed by Drs. Von. Lehe, P. J. Johnston, W. S. Judy, and L. F. Behling.

We had a very interesting meeting, the discussions on Drs. Pollitzer's and Beach's papers bring out some very interesting points, which I am quite sure will be helpful to all present.

J. B. JOHNSTON, *Secretary*

FLORENCE COUNTY

Date of meeting February 22, 1922. President E. M. Hicks in chair. Roll call, number present (including visitors) 35. Minutes read and approved.

Dr. Wm. P. Cornell of Columbia, read a paper on The Types, Causes, Prevention, and Treatment of the Diarrheas of Infants. This was discussed by every physician present. Dr. Cornell answered numberless questions, and for two hours proved a most profitable and delightful entertainment.

M. R. MOBLEY, M. D., *Secretary*.

ANDERSON COUNTY.

The Anderson County Medical Society held its regular monthly meeting February 8th at 12 o'clock noon in the Chamber of Commerce Rooms.

The meeting was called to order by the President, Dr. Milford. The minutes of the last meeting was read and adopted. Dr. Dean moved, and the motion was carried, that minutes be sent in for publication in the South Carolina Medical Journal. The President had the Secretary to read a letter that he had received from Dr. Boozer of Columbia relative to the Chiropractic Bill, urging that the members see or communicate with our Senator and Representatives and to ask them to use their influence in defeating that Bill. Remarks were made by Drs. Thompson, Corbett and McWhorter on the Chiropractor and his claims. It was moved and carried that the Secretary notify our delegation the attitude of our Society in regard to this matter.

Drs. Young and Nardin were elected as delegates to our State Meeting which is to be held in Rock Hill in April. Drs. Dean and Acker were elected as alternates.

Board of Censors to be appointed by the President at a later date.

Dr. Bare reported an interesting case on Spleno-myelogenous Leukemia. An open and free discussion followed.

The meeting was voted adjourned. Number present nineteen.

G. S. CLINKSCALES, *Secretary*.

GREENVILLE COUNTY SOCIETY

The Greenville County Medical Society held a great banquet February 9th, at the Ottaray Hotel. The principal speaker was Professor Sharpe of the Medical Department of the University of Maryland. Professor Sharpe handled the subject of Traumatic Surgery, especially during the world war, in a masterly manner. The Greenville Society is now one of the liveliest organizations in the South. Other speakers were Dr. E. A. Hines of Seneca, Editor of the State Medical Journal, who outlined the improvement in the Journal for the coming year. Dr. Frank Lander, member of the State Board of Medical Examiners, gave an interesting resume of the situation with reference to admission of Chiropractors to practice medicine in South Carolina. A general discussion followed Dr. Lander's remarks by various members of the Society.

THE S. C. PEDIATRIC SOCIETY MEETS WITH MARKED SUCCESS.

The South Carolina Pediatric Society has extended an invitation to every member of the South Carolina Medical Association interested in diseases of children to apply for admission. The applications have been coming in almost daily. The following physicians have enrolled up to date.

CHARTER MEMBERS.

Dr. Wm. P. Cornell, Columbia.
Dr. E. A. Hines, Seneca.
Dr. J. E. Watson, Anderson.
Dr. R. M. Pollitzer, Charleston.
Dr. W. M. Rhett, Charleston.
Dr. Wm. Weston, Columbia.
Dr. S. G. Glover, Greenville.
Dr. H. A. Mood, Sumter.
Dr. D. L. Smith, Spartanburg.
Dr. F. K. Rhodes, Florence.
Dr. M. W. Beach, Charleston.
Dr. E. W. Barron, Columbia.

REGULAR MEMBERS

Dr. Theo. M. DuBose, Jr., Columbia.

Dr. R. B. Epting, Greenwood.
 Dr. H. T. Hall, Aiken.
 Dr. C. F. Bullock, Nichols.
 Dr. O. L. P. Jackson, Union.
 Dr. W. E. Simpson, Rock Hill.
 Dr. Fletcher Jordan, Greenville.
 Dr. F. L. Martin, Mullins.
 Dr. T. L. W. Bailey, Clinton.
 Dr. F. B. Malone, Chester.
 Dr. L. E. Bull, Cheraw.
 Dr. John I. Barron, York.
 Dr. J. L. Thompson, Columbia.
 Dr. B. B. Steedly, Spartanburg.
 Dr. B. F. Wyman, Aiken.
 Dr. C. W. Kollock, Charleston.
 Dr. J. W. Davis, Clinton.
 Dr. V. M. Roberts, Blacksburg.
 Dr. Theodore Maddox, Union.
 Dr. W. C. Twitty, Rock Hill.

Dr. Robert Kirksey, Pickens.
 Dr. J. Louis Gray, Anderson.
 Dr. H. B. Thomas, Whitmire.
 Dr. Edward Patterson, Barnwell.
 Dr. F. L. Carpenter, Latta.
 Dr. F. G. James, Greer.
 Dr. H. D. Wolfe, Greenville.
 Dr. D. M. Crosson, Leesville.
 Dr. Wm. Simons, Summerville.
 Dr. R. J. Coney, Eutawville.
 Dr. E. W. Pressly, Chick Springs.
 Dr. R. B. Rhett, Charleston.
 Dr. Lester A. Wilson, Charleston.
 Dr. R. M. Fuller, Greenwood.
 Dr. W. Atmar Smith, Charleston.
 Dr. W. P. Timmerman, Batesburg.
 Dr. E. W. Carpenter, Greenville.
 Dr. E. L. Jagar, Charleston.

NEWS ITEMS

The National Research Council has announced that Detroit and New York City have been chosen for health investigation, which may continue for a quarter of a century. Attention will be directed toward determining the influence of the air with its varying temperature, humidity and movement on the health of many classes of people.

The sixth annual session of the American Congress on International Medicine will be held April 3-8 at Rochester, Minn., under the presidency of Dr. Sydney R. Miller, Baltimore.

Under the direction of the Philadelphia College of Pharmacy and Science, the United States Pharmacopeia is being translated into the Chinese language, so that American medical standards may be adopted.

According to a law adopted by the last Philippine legislature, 500 lepers have received special treatment in the Cluion col-

ony. Two hundred are treated with ethyl-esters of chaulmoogra oil, 100 with a formula prepared by Dr. E. Mercado, fifty with sodium gynecardate and fifty with sodium morrhuate.

Plans are under way in France for the celebration of Pasteur's centenary in 1923. The celebration will chiefly consist in an international exhibition of hygiene and bacteriology, which will be held May 1-Oct. 31, 1923, at Strasborough, where Pasteur began his epoch-making researches. A monument to Pasteur will be unveiled at the same time. The celebrations are in charge of the University and city of Strassbourg, the Pasteur Institute of Paris and the Pasteur family.

The memorial for the world war soldiers from Madison Co. N. Y., will be a tuberculosis hospital erected thru public subscription.

A bust of the last surgeon, Dr. Arnaldo Viera de Carvalho, was recently installed

in the large hospital at S. Paulo, the scene of his labors. His name has also been conferred on the newly organized Radium Institute at S. Paulo.

The congress on medical education, licensure, public health and hospitals was held at the Congress Hotel, Chicago, March 6-10, inclusive, 1922. This congress was participated in by the Council on Medical Education and Hospitals and the Council on Health and Public Instruction of the American Medical Association, the Association of American Medical Colleges, the Federations of State Medical Boards of the United States, and the American Conference on Hospital Service.

Col. Franklin H. Martin, Director General of the American College of Surgeons, was decorated with the Distinguished Service Medal by order of Adjutant General Harris.

Deaths from tuberculosis in the "registration area" of the United States during 1920 totaled nearly 100,000, the Census Bureau announced. Estimated that the mortality from this one cause in the entire country at 122,000, this would indicate a reduction of 10,000 from the total of the previous year, it was said.

The upward trend of the cancer death rate in the United States is accurately shown by the increase to 83.4 per 100,000 population in the registration area in 1920 from a rate of 80.5 per 100,000 in 1919.

Eight investigators sailed, November 16, for Peru, where they will make their headquarters at Cerro de Pasco, at a height of 14,000 feet in the Andes. The object of the expedition is to study the changes in the heart, circulation, respiration and chemical composition of the blood, which enables the permanent residents of Cerro de Pasco to live there in comfort and do arduous work

in the copper mines, at an altitude in which most people would be able to do very little on account of the rarity of the air. The problem is also of medical interest to aviators.

The National Tuberculosis Association announced that the cumulative author and title index of the transactions of the association from 1905 to 1920 is now ready for distribution. The index will be sent free to members of the association requesting it, and sold at a low price to non-members.

Another martyr to science was Dr. H. B. Cross, of the Rockefeller Institute, who died at Vera Cruz, Mexico, December 27th, from yellow fever. He had just gone to that region to study a local center of the disease.

The International Sanitary Congress, representing more than forty nations, has adopted the suggestion of the U. S. Public Health Service that plague, yellow fever and cholera be included among the so-called international notifiable diseases. It was decided that smallpox and influenza epidemics should also be a matter of diplomatic notification whenever they occur in the various countries. This suggestion was adopted at the recent International Sanitary Congress, which has just adjourned in Paris. The United States was represented at the recent meeting by Assist. Surg.-Gen. Rupert Blue, U. S. Public Health Service, Washington, D. C.

Congress has passed a measure directing the Secretary of War to turn over to the American Relief Administration surplus medical and surgical supplies for use in the famine districts of Russia.

Dr. Knight Dunlap, professor of experimental psychology in Johns Hopkins University, has developed the chronoscope, by means of which he measures the time of

mental operations and thereby gauges with scientific accuracy a man's intelligence.

According to a recent decision by the attorney-general of Ohio, osteopaths have the right to sign death certificates. The ruling holds that "if the osteopath meets the educational requirements of the statutes" and takes the same examination in diagnosis as is taken by physicians, under the law he should have the same legal rights as are granted to physicians.

A bust of the great Argentine epidemiologist, Dr. Jose Penna, was recently unveiled in the hall of the medical department of the University of Buenos Aires. It was installed by the Academia de Medicina, which holds its meetings there, Penna having been one of the most active members of the organization, as well as chief of the national public health service.

The executive committee of the South Carolina state board of health has adopted a resolution making available for inspection of the state health officer, or his representative, records pertaining to birth in all hospitals in South Carolina.

The first step in combating tuberculosis in eighteen states, comprising the territory of Southern Baptist Convention, was the recent establishment, on a tract of 143 acres at El Paso, of the Southern Baptist Sanatorium. In addition to this tuberculosis sanatorium, the Southern Baptists have seventeen regular hospitals in operation and seven others under course of construction. This hospital property is valued at approximately \$7,000,000.

Great preparations are under way for the celebration of the seven hundredth centennial of the official foundation of the medical faculty of the University of Montpellier. The Paris Medical says that there was a medical school there as early as the tenth

century, but it was not officially recognized until the thirteenth. A monument to Rabelais, one of its most brilliant alumni, will be unveiled on the occasion as already mentioned.

According to statistics compiled by the Baltimore City Health Department, Prohibition is helping to lower the city's death rate, besides cutting down the number of prisoners in Baltimore City Jail and House of Correction and lessening the population at Bay View Asylum.

One person in every twenty who dies in Massachusetts dies in a state institution and one in every ten at some time enters an insane or feeble-minded hospital, according to Dr. L. Vernon Briggs, formerly chairman of the state board of insanity. Urging a study of the possibility of adopting preventive measures in dealing with the growing problem of mental diseases, Dr. Briggs pointed out that the state is spending from six to seven million dollars annually for the care of delinquents.

There is being organized by Dr. Borrel, professor of hygiene and director of the institute at Strasbourg, a congress of hygiene to be held at Strasbourg in the spring of 1923. Dr. Borrel desires to attract groups of physicians in the United States to this congress, and would welcome exhibits of societies, institutions, or dealers in drugs, instruments and medical supplies, from the United States.

Lord Atholstan, proprietor of the Montreal Star, recently offered \$100,000 to the first graduate or student of any recognized university who within five years after date discovers a medicinal cure for cancer. The decision is left to the Royal College of Physicians and Surgeons, London, England. The offer, which was made "to help in stimulating the work of research throughout the world," may be renewed.

It has been announced that the establishment of a school of sanitation at Tuscaloosa in memory of the late Major General William G. Gorgas, will be undertaken by a group of southern physicians. The site will be adjacent to the University of Alabama.

Deaths from cancer in the death registration area of the United States in 1920 totaled approximately 73,000, according to a report by the Census Bureau, which on a basis of proportional population estimated the total of deaths for the entire country at 89,000, or an increase of 5,000 from the estimates for 1919.

Medical Intern Wanted for St. Elizabeth's Hospital, Washington, D. C., for \$1,200 a year and maintenance, plus the usual government bonus of \$20.00 per month. The term of office is one year. This hospital has over 3,000 patients and about 800 employes to care for. Application for examination to fill the position, should be made to the Civil Service Commission, Washington, D. C., Prior to March 1, 1922.

A Masonic Tuberculosis Sanatorium is in prospect for the Southwest. It is intended that the proposed hospital serve, 2,500,000 Masons in the country, of which it is estimated that 42,200 are suffering from tuberculosis.

Yale University has received an anonymous gift of \$100,000 for the establishment of a professorship in the medical school in honor of Dr. Wm. H. Carmalt, who retired a few years ago, after fifty years of distinguished service in surgery.

Roentgenologists Wanted—The United States Civil Service Commission will receive applications for position of Roentgenologist, until March 31, 1922. Salaries in these positions range from \$90 per month

to \$3,000 per year, with quarters and subsistence and the usual \$20 per month for satisfactory service. Application for examination should be made to the United States Civil Service Commission, Washington, D. C.

The Twentieth anniversary of the Rockefeller Institute for Medical Research was celebrated on January 20th. Brief speeches were made by Mr. John D. Rockefeller, Jr., of the Board of Trustees, and Dr. Wm. H. Welch, of the Board of Scientific Directors.

The Department of Commerce, through the Bureau of the Census, announces that the second official publication on life tables, derived from births, deaths, and population in this country, is soon to be issued. These tables show conditions as they existed in 1890, 1901, and 1910, thus making it possible to study the changes which have taken place in mortality during two decades.

The election of Madame Curie to the French Academy of Medicine has recently been proposed.

The May meeting of the A. M. A., at St. Louis, promises to be the largest in attendance of any of the association's sessions. Reservations should be made by communication direct with the hotels.

The Association for the Development of Medical Relations of the Faculty of Medicine of Paris announces the establishment of a Bureau of Information to aid all foreign doctors and students from allied or friendly nations in any way during their sojourn at the Faculty of Medicine in Paris or in other French Universities. Moreover, to meet the request of groups of doctors or students, the association is ready to organize courses of lectures on subjects suggested by the doctors or students.

The American Relief Administration announces that although food packages are a vast help in combating famine and disease in the stricken provinces of Russia, medical supplies and clothing are likewise urgently needed. Contributions for the latter may be made to the offices of the American Relief Administration, 42 Broadway, New York.

Drs. A. E. Gochicoa, C. Canseco, A. Alarcon and A. Cauron, of Tampico, Mex., have founded the *Revista Medica de Tampico*, a medical publication to be issued monthly.

The trustees of Western Reserve University have accepted the offer of Samuel Mather of Cleveland to pay for the construction of new medical school buildings which will cost about \$2,500,000.

A resolution has been presented by Representative Volk of New York to the House of Representatives asking that a committee consisting of fifteen members be appointed to investigate narcotic conditions in the United States.

BOOK REVIEWS

AMERICAN ILLUSTRATED MEDICAL DICTIONARY (Dorland). New (11th) Edition, Revised and Enlarged. A new and complete Dictionary of terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, Veterinary Science, Nursing, Biology, and kindred branches; with new and elaborate tables. Eleventh edition, revised and enlarged. Edited by W. A. Newman Dorland, M. D. Large octavo of 1229 pages with 338 illustrations, 141 in colors. Containing over 1500 new terms. Philadelphia and London: W. B. Saunders Company, 1921. Flexible leather, \$7.00 net; thumb index, \$8.00 net.

A constantly increasing demand for this book has called for a revised edition, in order that the accumulating terminology of medicine might be fully represented. During the two years that have elapsed since the publication of the tenth edition there has been no let-up in the coinage of new terms. Additions have been most numerous in the field of biologic chemistry, endocrinology, immunology, and neurology; yet every branch of medical science has received its share of new terms. This eleventh edition contains several hundred new definitions, most of which are not to be found in any other dictionary.

PSYCHOANALYSIS. Second Edition. By A. A. Brill, Ph. B., M. D., Lecturer on Psychoanalysis and Abnormal Psychology, New York University. Third edition, thoroughly

revised. Octavo of 468 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$5.00 net.

Psychoanalysis has been given considerable attention in recent years, much of which yet remains in the haze of uncertainty. Undoubtedly though, there is a field for further study along this line and the author has made a contribution towards further clarifying the whole subject. Many case reports are included in this volume, which is a method of presenting scientific facts of today growing in favor. The book is dedicated to Freud, recognized as a master in this branch of medicine.

THE PRACTICAL MEDICINE SERIES.—

Comprising eight volumes, on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, M. D., Professor of Physician Diagnosis in the Northwestern University Medical School.

Volume V.—Gynecology. Edited by Emilius C. Dudley, A. M., M. D., LL. D., Professor of gynecology, Northwestern University Medical School; Gynecologist to St. Luke's and Wesley Hospitals, Chicago.

Obstetrics. Edited by Joseph B. DeLee, A. M., M. D., Professor of Obstetrics, Northwestern University Medical School; Attending Obstetrician Chicago Lying-in and Mercy Hospitals; Consulting Obstetrician, Provident and Evanston Hospitals.

Series 1921. Chicago. The Year Book Publishers, 304 South Dearborn Street. Price \$1.75.

This is of the well-known series of year books valuable in condensing the reviews of the literature of the world and giving the busy physician practical suggestions.

ABDOMINAL PAIN. By Prof. Dr. Norbert Ortner, Chief of the Second Medical Clinic at the University of Vienna. Authorized Translation by William A. Brams, M. D., Formerly Lieut.-Commander, Med. Corps, U. S. N., and Dr. Ifred P. Luger, First Assistant, Second Medical Clinic, University of Vienna. New York. Rebman Company, Herald Square Building, 141-145 West 36th Street.

The masters of the Vienna School of Medicine have always commanded universal respect throughout the medical world. This particular volume should prove of marked interest to both the surgeon and the internist. The translators have performed their duty well. The subject matter has been taken up under the following general heads:

Author's Preface.

Translator's Preface.

Introduction.

Diffuse Abdominal Pain.

Localized Abdominal Pain.

Epigastralgia or Stomach Cramps.

Pain in the Right Hypochondrium

Pain in the Right Ileocecical Region.

Acute Pains in the Left Iliac Region.

Pains in the Lumbar Region, Flanks and

Lateral Parts of the Abdomen.

Pain in the Left Hypochondrium.

Bilateral Hypochondrial Pain.

Pain in the Region of the Navel.

Pain in the Hypogastric Region.

Appendix:

Radiating Abdominal Pain.

Relation of Abdominal Pain to the Intake of Food.

Abdominal Pain During Defecation.

Abdominal Pain Associated with Bodily Motion.

Abdominal Pain Associated with a Sensation of Anxiety.

Abdominal Pain Associated with Obstipation.

Abdominal Pain Associated with Menstruation.

Index.

A TEXT-BOOK OF PHYSIOLOGY (Eighth Edition). **FOR MEDICAL STUDENTS AND PHYSICIANS.** By William H. Howell, Ph. D., Professor of Physiology, Johns Hopkins University, Baltimore. Eighth edition, thoroughly revised. Octavo of 1053 pages, 308 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$6.50.

Howell's Physiology has reached its eighth edition and represents the highest type of scientific work usually emanating from Johns Hopkins University. The book has evidently proven popular both with the medical schools and the profession.

INFANT FEEDING. Fourth edition. By Clifford G. Grulee, M. D., LL. D., Associate Professor and Acting Head Department of Pediatrics at Rush Medical College. Fourth edition, thoroughly revised. Octavo of 397 pages, illustrated. Philadelphia and London. W. B. Saunders Company, 1922. Cloth, 4.50 net.

The author has endeavored to bring the literature of this subject up to April 1, 1921. It is the fourth edition and, therefore, has been before the reading public for quite a number of years. The author gives credit to Marriott for his investigations of intoxication and decomposition and also describes infant feeding as devised by Pirquet. The anatomy and physiology of the gastro-intestinal tract has been touched upon; also the cause of absorption and metabolism. A considerable section is given to the various foods used in artificial feeding. It is a volume of 397 pages.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS. Fourth edition. By Jay Frank Schamberg, M. D., Professor of Dermatology and Syphilis, Graduate School of Medicine, University of Pennsylvania. Fourth edition thoroughly revised. Octavo of 626 pages, 265 illustrations. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$5.00 net.

Dermatology is an ever widening field both of research and of practical consideration. In this book the treatment of syphilis has been entirely re-written, the therapeutics of this disease undergoing changes from time to time. The illustrations are good and very

numerous. It is one of the most authoritative works published in this country.

THE SUBMUCOUS RESECTION OF THE NASAL SEPTUM. By W. Meddaugh Dunning, N. Y. C.; Consulting Otologist, Manning, Consulting Ootologist, Fordham Hospital, N. Y.; Consulting Laryngologist, Ossining City Hospital, Ossining, N. Y.; Consulting Laryngologist, the Alexander Linn Hospital, Sussex, N. J.; Assistant Surgeon, Manhattan Eye and Ear Hospital, N. Y.; Surgeon, Bronx Eye and Ear Infirmary, N. Y.

This book is a description of the procedure followed in a specialized form of nose surgery, the submucous resection of the nasal septum. Starting in the early years of the century with the operations worked out by Ballenger and Greer which supersede still earlier crushing operations, modifications in procedure have been introduced by the author and others working in this field. The pages which follow show that the changes have affected the technic of posture of surgeon and patient; the manner and method of anesthetization; and the use of specially designed instruments, to which the writer has contributed the Dunning curette elevator.

The first five chapters of the book appeared first as a series of articles in the January, February and March, 1921, numbers of the American Journal of Surgery. They have been expanded, revised, and put in permanent form with the addition of three chapters dealing with case records, to meet requests from colleagues and students.

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DISEASES OF THE EYE

(New ninth edition)

DISEASES OF THE EYE. A Handbook of Ophthalmic Practice for Students and Practitioners. By George E. deSchweinitz, M. D., LL. D. Professor of Ophthalmology in the University of Pennsylvania. Ninth Edition, Reset. Octavo of 832 pages with 415 text-illustrations and 7 colored plates. Philadelphia and London: W. B. Saunders Company, 1921. Cloth, \$10.00 net.

W. B. SAUNDERS COMPANY

Philadelphia

London

This splendid book just from the press is one of the most authoritative text books ever published. The author is well known and favorably known throughout the civilized world. A large number of new subjects have been taken up as well as the volume revised.

CORRESPONDENCE

Preston Division, Preston, Cuba.

My dear Dr. Hines:

When I get home I will have many interesting things to tell you about the Examining Board of Cuba and how they do it. It was some experience for me and on my word of honor, not any more for me. I took the regular examination that their students take at the University of Havana and believe me they rubbed it into me, and think of being on examination for two weeks, never again. Yet they gave me a diploma just as if I graduated from the University of Havana or Cuba. And when I had finished, every member of the Board congratulated me on having passed in a shorter time than any other American doctor and also the President extended his hand and said I had made the highest grade that

had ever been made before the Cuban Board by any American doctor. The Chairman of the Board is Dr. Aristides Argamonte who did so much for yellow fever years ago. This work is very interesting down here. We have everything on the map. I am really glad I came down for a while for it has been worth while in a way.

It's a beautiful country with a great future, but some one else will have to develop the future in medicine other than me. It seems wonderful to see the beautiful flowers and vegetables all in full bloom in January and February, and at the same time, you all are having snow and ice at home.

With kindest regards and best wishes,

Your friend,

(Signed) Baxter Haynes.

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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EDITORIAL

THE ROCK HILL MEETING EXCEEDS EXPECTATIONS

In point of attendance and more especially from the standpoint of scientific interest the Rock Hill meeting of the State Association deserves to go down as a record breaker. The registration numbered two hundred and sixty-one. More than thirty papers were read. On the second day the interest was so keen and the program so replete with scientific interest that it was necessary to run a continuous session from early morn until the sun was sinking low in the Western horizon. The presiding officer inaugurated for the first time in our memory a lunchless day. To at last break the precedent in this way and stem the tide (usually reaching a stampede), to get away on the second day was an extraordinary feat on the part of the retiring President, Dr. H. L. Shaw, of Sumter.

While the Scientific Committee deserves commendation for the high plane upon which the program was pitched, at the same time, the determination of the retiring President to energize every moment of the two days so that no one would dare to leave, deserves special notice.

The papers by our invited guests were so placed on the program that they added much pleasure to the members of the Association and aided very materially in keeping up the keen interest to the last moment. It is safe to say now that for all time to come the second day will prove as attractive as the first day and no one need plan to rush back home just as soon as the first day is over.

The Journal appreciated very keenly the many complimentary remarks made by letter before the meeting of the House of Delegates and also the report of the Council to the House of Delegates and the attitude of the House towards the future development

of the Journal. The Council recommended, among other things, that much greater interest be manifested in the advertising feature of the Journal in order that the income may be sufficient to defray the increased expenses brought about by the marked improvement in recent months.

The election of officers, especially that of President, brought forth the most strenuous efforts on the part of the friends of the respective candidates ever witnessed in the House of Delegates. The race was so keen that the House did not adjourn until well after midnight. The election of Dr. C. F. Williams of Columbia will certainly delight physicians everywhere in the State. The splendid constructive work hitherto on the part of the President-elect in many fields

of activity is too well known to stress. Full details of the President-elect's record will be published in an early issue. Suffice it to say that the inspiration of Dr. Williams' constructive genius will be felt at once to the remotest constituent county societies.

It is too early to speak of the plans for the future. The House of Delegates unanimously approved of the Secretary's recommendation that the next annual meeting, the seventy-fifth, be held in the city of Charleston and that it be known as a "home-coming" meeting and that elaborate arrangements be made to the end that the organization of the South Carolina Medical Association in the city of Charleston in 1848 may be celebrated as the three-quarter century epoch deserves.

ORIGINAL ARTICLES

THE PHYSICIAN'S OBLIGATION TO THE PATIENT.

By H. L. SHAW, M. D. Sumter, S. C.
Presidential Address delivered before the
South Carolina Medical Association,
Rock Hill, S. C. April 19, 1922.

The immortal Lee has said, "Duty is the sublimest word in the English language", and at the beginning of his son's collegiate course he wrote him, "Do your duty, no one can do more, and to do less is failure."

As physicians whether we be general practitioners, surgeons, internists, neurologists, or belong to some other of the more special branches of the profession, we owe each individual patient who comes under our care a special duty.

In selecting a subject for an occasion like this it is difficult to find one that will be of interest to all. I have decided on a theme that applies to all, and therefore the message is for each of us, and to be appropriated individually.

Indeed the practice of medicine is all one, and we are each dependent upon the other, and necessarily so. Our work often overlaps and dovetails bringing us into closer touch with each other, and creating a spirit of friendship and fraternal rivalry.

"Why even the body consists not of one member, but of many. If the foot were to say, "Because I am not the hand, I do not belong to the body", that does not make it no part of the body. If the ear were to say, "Because I am not the eye, I do not belong to the body", that does not make it no part of the body. If the body were all eye, where would hearing be? If the body were all ear, where would smell be? — As it is there are many members and one body. The eye cannot say to the hand, "I have no need of you, "Nor again the head to the feet, "I have no need of you." Quite the contrary—If one member suffers, all the members share its suffering: if one member is honored, all the members share its honor." The general practitioner should not say to the surgeon, because you are not a general

practitioner I have no need of you; neither should the surgeon say to the general practitioner because you are not a surgeon I have no need of you. But they together go to make up the medical profession. We rejoice to say that today this condition is generally prevalent.

The first obligation of a physician to his patient to which we wish to call attention, is the necessity of his keeping up to date, by post graduate study, reading new literature, attending medical meetings, and in this way keeping in close touch with the latest and best discoveries of the day. As I look around me I see faces of those whom I saw at the meeting of the State Association years ago, just how many years ago I dare not say. I expected to see them here and they have not failed me. Why are they here? Not altogether for the social feature, though this is fine, but they are here to teach and be taught, that they may be helped and be a help to others and in this way obtain the newest and best for their patients.

Among the first obligations due our patients is the realization that we are dealing with an individual, a human being, of whom it has been said, he is "fearfully and wonderfully" made. We are not dealing with organs alone, but with a complete piece of machinery, a part of which may, or may not be out of adjustment, and as medical men it is our duty to locate the damage if there be any, and correct it.

The writer once asked a colleague of much prominence in the state, one who was supplied with many of the modern devices to aid in making a correct diagnosis, what percent of his cases he correctly diagnosed. "Not more than twenty," he said. "Well, what percent do I, with my limited equipment correctly diagnose?" I asked. "Not a — one," he replied.

Gentlemen, one of the most important duties we owe our patient is, to make an early and correct diagnosis. To do this requires time and often much physical labor and mental activity. We may be required to make repeated visits, and to do much

testing, but it is best for the patient, and repays the physician an hundred fold.

In conversation in my office recently with a fellow practitioner, who has long since adopted the plan of using every available means for making a correct diagnosis of all the cases intrusted to his care he said. "How well I remember as a young man being in the office of Dr. Blank, when a patient would come in to see him with the statement that she was suffering with uterine hemorrhage. He would look at her tongue, count her pulse, and prescribe ergot". Think for a moment of the many conditions that could cause uterine hemorrhage, and ask yourself if you would be willing to prescribe ergot without at least a careful examination. Sometimes he said a patient would come in suffering with anemia, and Dr. Blank would prescribe tincture ferric chloride. Consider the many causes of anemia and ask yourself if the prescription would meet the indications in all cases, the anemia of hookworm for instance. And yet again a patient would be seen with high fever. The prescription would be calomel, podophyllin, and quinine, without regard to the cause of the fever. Such practice is injustice to the patient, and should not be indulged in by the physician.

In these times when we have so many devices with which to aid us in making a diagnosis, it seems inexcusable not to make a correct one in the majority of cases. If necessary every agency should be used, and above all a careful history should be taken. In reaching a correct conclusion history taking is often of more importance than X-ray or laboratory work. Many things are revealed in a careful history that would not show in the use of the X-ray, or under the 'scope. A correct and early diagnosis is desirable, but should you find after a more careful study of the case that your early diagnosis was wrong, have the manhood to say so and change it. While diagnosis is the first, and essential thing let us guard against the growing tendency to let diagnosis eclipse treatment, for the treatment is

the most important thing from the patients standpoint, and treatment means more than therapeutics. It often means the tedious and disagreeable task of regulating a patient's life, or diet, or practically the creation of a new and better environment for the patient at home. We should exhaust every means for discovering a pathological basis before masking our ignorance, consoling ourselves, and checking our efforts with a diagnosis like "neurasthenia," "rheumatism", "liver trouble", "functional heart trouble", etc. Rather frankly admit ignorance and seek consultation.

The physician who treats his patient honestly at all times and under all circumstances will eventually win the confidence of the people, and easily assume control of their sick. When a sick person intrusts himself to your care he lays upon you a responsibility to fulfill which, you should give all that is best in you. Sometimes a patient or his friends may refuse to cooperate with you in the management of the case. This of course is to be regretted, but if by yielding a minor point, one that will not affect the desired results, and yet one that will please the patient, it is best to do so, for it is only a matter of policy and one of principle, and may result in good to both physician and to the patient. Never speak slightly of a suggestion made in good faith for the patient's benefit, regardless of who makes it. If possible always approve what has been done for the patient before your arrival. Tact, that elusive, beautiful, God-given quality, should walk hand in hand with skill and knowledge in the physician's life. Discreet, unobtrusive, kindly, tactful help to patients in matters not medical—moral, religious, and social difficulties, is not only the privilege but the duty of the physician.

Quoting from principles of medical ethics of the American Medical Society: "A profession has for its prime object the service it can render to humanity, and reward or financial gain should be a subordinate consideration. The practice of medicine is a

profession. In choosing this profession an individual assumes an obligation to conduct himself in accord with his ideals, "Pity the blind", cries the beggar as he sits on the street corner, with outstretched hand, or as he taps his way along the thoroughfares of our cities. Our hearts echo the cry when we see those of our profession, so blinded that they can only see the monetary side of the practice of medicine.

"Patience and delicacy should characterize all the acts of a physician." Oft times when patience ceases to be a virtue it is more difficult to maintain this patience in the face of querulousness and peevishness, and there have been occasions when we lost it. We remember those times with sincere regret.

Uniform kindness and the professional touch mean so much to the patient. The soft step, the gentle speech, the friendly smile, the sympathetic and careful handling of inflamed parts, or aching joints, is a duty we owe to our patients. As physicians we should avoid alarming patients for they hang upon our every word, look, and gesture. While we should never deceive them, yet we should always cheer and encourage, and if possible add to their peace of mind, and bodily comfort.

As physicians we should consider ourselves distributing centers, and when a patient comes under our care whom we cannot handle, we should cheerfully refer him to the physician who can best give him help. The surgeon is censured sometimes for what seems to be a desire on his part to operate on all cases. He is no more to blame than the general practitioner who holds on to the patient who should be referred to the surgeon.

The fear of disease and dread of death is universal in the human family. Rich and poor, high and low, the president in the White House and his chauffeur, the wealthy Texas ranchman and the cow puncher, the beautiful lady of the home and the chambermaid, all come under our care as physicians

and should be accorded the very best services that we can render.

Patients must not be neglected. As physicians we are free to choose whom we will serve, but after assuming a case we should see to it that the patient has the very best service we can give under the circumstances.

"The confidences, concerning individual or domestic life intrusted by a patient to a physician and the defects of disposition, or flaws of character observed in patients during medical attendance should be held as a trust and should never be revealed except when imperatively required by the laws of the state". There are occasions, however, when a physician's duty to society, may require him to reveal secrets which otherwise he would guard most zealously. These problems will come to each of us, and may we solve them by discretion.

"Faith is the great controlling guide in choosing the physician who is to stand by what may be one's death bed, or the death bed of one's loved one. Therefore, the two greatest elements of medical faith are; first that one is willing to do the best that can be done for the patient; and second, that he is not only willing but knows how."

Therefore realizing that we are dealing with an individual, an ego, a personality, let us treat him as such, making an early and correct diagnosis, for upon this depends our future success or failure in the management of the case, remembering that patience and delicacy should characterize all the acts of a physician, and guarding well our speech so as never to betray a confidence: let us as physicians sell our lives as dearly as possible, especially in these days of financial stress, may we see to it that none suffer for the lack of such help as we can give them, remembering when our life's work is over, we hold in our cold dead hands, only that which we have given away.

INFECTIOUS JAUNDICE, OR WEIL'S DISEASE ALSO SPIROCHETAL JAUNDICE WITH REPORT OF FOUR CASES IN ANDERSON.

By C. S. BREEDIN, M. D., Anderson, S. C.

In the Italian army Bravetta has had hundreds of cases in his care. There is an incubation of a week or two, then the period of invasion, which lasts from 2 to 6 days. Fever is usually so slight that it is not noted, and there is no jaundice although there may be intense muscular pains, suggesting rheumatism, or digestive disturbances with headache, suggesting typhoid. Then follows the stage of jaundice, during which the temperature drops to normal or below and the pains subside. Next follows usually an interval of a day between defervescence and the onset of the cholemia. It is accompanied by weakness, at times extreme. The spleen and liver are enlarged. A special feature of the disease is that the temperature runs up again after an interval of from 4 to 6 days. The glands also swell especially in the right axilla. There were no hemorrhages from the skin or mucosa in his cases, but a tendency to rhinorrhagia was common. As the jaundice and albuminuria subside, the depression is extreme, with vague pains, low blood-pressure and brownish tint of the skin, and the prostration and convalescence are protracted for a considerable time.

ETIOLOGY, India, in 1915, discovered that *Spirochaeta ichtero-haemorrhagica* was the cause of Weil's disease, or epidemic jaundice, to which the name "spirochetal jaundice" is now applied. The rat was found to be a carrier of the parasite. During the war it occurred among soldiers of practically all nations, but particularly those in trenches and other rat-infested regions. Yet, many countries far from the war, including Japan, are infested with spirochetal jaundice bearing rats. Lyons, Marseilles, Barcelona, Tunis, Algiers and New York

have already given scientific proofs of the same danger in their midst. London is the latest city to furnish new evidence of the widespread occurrence of the parasite in these rodents, Foulerton having examined more than a hundred of these rodents, at the Department of Hygiene in University College, found at least 4 per cent infected with the spirochete of jaundice. Although spirochetal jaundice in man has been caused by rat-bite direct infection in this manner can be excluded in practically all instances, contrast with what happens in the genesis of rat-bite fever due *SPIROCHAETA MORSUS-MURIS*. Foulerton states that although the organism has not quite certainly been identified in the intestinal contents of the healthy rat, it has been found in the feces of infested guinea-pigs; and its presence in the feces in cases of spirochetal jaundice in man may be assumed.

Noguchi has recorded a case in which the urine was actively pathogenic as late as 4 weeks after the onset of the disease, the convalescent stage of which commences usually at about the fourteenth day. The urine of human patients must still be looked on as a source of possible danger.

S. Wataguchi cultivated the spirochete of Weil's disease on a watery mixture of the blood. Guinea-pig inoculation with these cultures resulting in a reproduction of the disease, and an immunizing serum was obtained from rabbits. Specific immune bodies were found, and immunity was conferred by injection.

PATHOLOGY—Lindstedt, after wide experience, concludes that it is contagious and has a period of incubation of 2 or 4 weeks or even longer, and that it confers immunity. In Sweden at least it differs from Weil's disease. Infectious catarrhal jaundice has a characteristic course with an acute, febrile initial stage and then a second, afebrile phase with jaundice. It seems to modify the parenchyma of the liver, but only as part of the general infection.

In 276 cases of spirochete jaundice ob-

served in troops, Salvaneschi found the gall-bladder always enlarged and tender and the liver usually much enlarged from the very first. The spirochetes seem to be found constantly in the urine, and hence the close quarters in the trenches favor transmission of the infection in food and water. The spirochetes may also find their way into the body through abrasions.

TREATMENT—The writer believes that these cases should be treated similar to any acute infection—hydro-therapy for the temperature and toxemia, fluids freely, fluids by mouth if the stomach is retentive; if the stomach is not retentive, fluids should be given per rectum, in quantities of one half to one pint every three or four hours, in which has been dissolved a heaping teaspoonful of bicarbonate sodium. It is well to begin the treatment with a purge, and if vomiting is a troublesome feature, fractional doses of calomel, ipecac, resin podophyllum bicarbonate sodium, and aromatic powder will be found helpful. These patients do better on a very restricted diet until convalescence is well established. The pains and general aching may require aspirin for its relief. It is better to follow each dose of aspirin with bicarbonate sodium.

I desire to report four case that may be of interest to the profession. These cases occurred in my practice during the first half of December. They were all characterized by marked jaundice and intense vomiting. These cases were infectious jaundice, but as to whether or not they were true cases of spirochetal jaundice or Weil's disease I do not know. As my laboratory technician was out of the city for a number of weeks, no laboratory study of the case was made. Clinically, however, they bore all of the earmarks of Weil's disease or Spirochetal jaundice.

Of the four cases three were among school children: J. M., male, ten years old, L. S., male, seven years old, M. B., female, twelve years old, A. R. C., female, three years old. All of these cases but one,

began with a simple cold, irritation of the throat, slight soreness of the throat, mild cough, and fever ranging from 102 to as high as 105 1-2, in one case. The fever lasted for, in three cases, five days—followed by sub-normal temperature for three or four days. The jaundice made its appearance on the fifth day in three of the cases, and on the seventh in the other case. They all showed marked tenderness over the liver from the beginning of the illness. There was marked vomiting, beginning on or about the third or fourth day and continuing for several days, in all cases. The jaundice lasted for about six or seven days from the beginning of its appearance.

Patient L. S. and M. B. live in the same neighborhood, and patient J. M. and A. R. C live on the opposite side of town, but only about one block apart.

One other point of interest was the mild delirium that lasted for two weeks in the case of patient M. B. This delirium was present even when the temperature was normal. This symptom is mentioned by Weil in his original description of the disease.

The symptom complex of these four cases is slightly different from the description of the disease given by Weil in 1886, but are very similar to cases reported by Trenbur, and Schallert (Medical Clinic April 16, 1916.)

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RESTORATION OF FUNCTION IN GYNECOLOGICAL SURGERY.*

BY WILLIAM D. JAMES, M. D.
 Hamlet, N. C.

During the past decade, surgery has made considerable advances in dealing with pathological conditions of the organs of the human body which have definite physiological functions to perform. The school of surgeons which preceded us, all glory in their name, was inclined to deal with the pathological conditions met with by literal application of the Biblical phrase, "If thy right eye offend thee, pluck it out", with no thought of to-morrow's need for that particular organ. The trend of surgery now is along the lines of conservatism, of correction of the etiological factor of the diseased conditions and restoration of the anatomical relations, with the hope of restoring former physiological functions, if this be possible, or, at least, to alleviate reflex conditions which are present because of the abnormal state of certain structures. The application of these principles to one's cases of gynecological nature will result in much gratitude from patients who have been relieved after years of chronic illness.

To illustrate, suppose we take a typical case, such as each of you must have in his practice. Mrs. X, age 47, occupation is housework. Her chief complaints are (in her own words) about as follows,—back-ache, feeling of weight in the lower part of the abdomen which is often accompanied by pains of more or less severity, frequency of and burning upon urination, constipation, nervousness, and headache. In a long drawn out story, she tells you that this feeling of weight she has in the lower part of her abdomen is so uncomfortable that she has been unable to attend to her household duties as formerly, that at times she feels that her internal organs will drop out. Further questioning will bring fourth many

*Read before the Marlboro County Medical Society of South Carolina, Bennettsville, S. C. January 5th, 1922.

more complaints, but, as this is only an average case, we shall let it rest here.

Chief among the points of her personal history, probably, will be that she is the mother of seven or eight children. Perhaps, in some of the earlier confinements, the use of forceps for delivery was necessary, and she had lacerations, which may or may not have been repaired at the time.

In your physical examination, you note that she is well nourished, perhaps, even tending to obesity. There are no signs or other symptoms or toxic hyperthyroidism to explain the nervousness. Let us suppose the examination is negative until we consider the abdomen. At once we find a relaxed abdomen wall with poor musculature. Visualizing the conditions within, we are prejudiced that the same state of affairs exists therein that there is general ptosis of all the abdominal structures. Tenderness over the ovarian regions may be only suggestive. To continue with a careful vaginal examination, the patient upon the examination table, first, you will probably notice the labia separated and a cystocele occupying the anterior part and a rectocele the posterior part of the vaginal introitus. These will be exaggerated by asking her to bear down, because the vaginal walls have lost their elasticity and tonus from previous lacerations and repeated child-birth. The cervix may be found in almost any condition from old lacerations, possibly, endocervicitis, erosion of the lips, chronic ulcerative areas about an old scar, or marked elongation. The uterus may be found in any degree of subinvolution or in any position except normal. Usually, it will occupy a position of posterior displacement; it will be freely movable to an anterior position, only to resume its former retro-displacement when the support is removed.

Now the question: What should be advised in this case? Here is a woman who has more than fulfilled the expectations made of her powers to beget offsprings. As the results of the severe demand made upon her

during her periods of gestation and confinement, abnormal conditions of certain parts of her body have been induced. While the problem at hand is not so much a question of conservation of the structures for future use, for that is nil, it does concern her general bodily health and comfort by virtue of the reflex conditions resulting from these abnormalities. The title of this paper deals with restoring the function of these pathological organs. We reason: In a woman forty-seven years of age, there is no argument for restoration the tonus and normal anatomical relations of the pelvic floor for the function it has in child-birth. Also, the uterus need not be considered as an organ for the further physiological function of gestation. But what of their abnormal anatomical relations as regards the complex and reflex conditions they will cause if not corrected.

The primary function of the pelvic floor is to give support to that outlet and the organs within. If it is relaxed, this function is lost, and there is need of restoring it. The anterior vaginal wall is one of the strong supports of the urinary bladder; when this function is impaired, a cystocele develops. The small herniated portion of the bladder usually causes a pocket of urine to collect in the base of the bladder, which can not be expelled entirely upon urination. Decomposition will take place, with the annoying symptoms to the patient of frequency of urination with burning. Obviously, this condition can be cured only by operative procedure to restore the anterior vaginal wall to its normal condition.

Likewise, if a rectocele be present because of relaxation of the posterior vaginal wall, there will be diastasis of the rectile fascia and the levatores ani muscles, with the attendant loss of the functions of these structures in the support of the rectum and the fact of defecation. The support of the rectum being lost, it will be only natural for it to form somewhat of a reservoir for accumulated fecal matter. With the con-

stipation and the absorption of the various products of intestinal decomposition, a long train of nervous symptoms is prone to develop. By no means other than an operation to correct the anatomical relations of the posterior vaginal wall can these conditions be overcome.

In regard to the uterus, which is found in abnormal position, as mentioned above there is no physiological function to be restored. It has accomplished its intended function in the previous gestations, and, with the advent of the climacteric, its function is to proceed to an atrophic condition; and more important than this, its function is *not* to remain in an abnormal anatomical position and cause the many reflex symptoms incidental to uterine ante—and retro-displacement. Because it is in an abnormal position, it is only reasonable to suppose that there will be deviations from the normal in its blood supply and drainage, that these are causative factors of subinvolution, and that unexplainable symptoms will follow. A uterus, which is in a position of retro-displacement, the fundus pressing on the intestines and sacral nerves, will cause back-ache, pains radiating down the thighs and legs, and vague pains and feeling of discomfort in the pelvic region. There are many women who suffer from severe head-ache, resulting from uterine displacement. If the fundus is in a position of forward displacement, the function of the bladder may be interfering with the irritable bladder and chronic cystitis develop. The restoration of the normal functions of the organs affected by the displaced uterus will follow only after certain measures have been carried out which will restore the uterus to its normal anatomical position.

Of the pathological conditions of the cervix, there is, in reality, no consideration to be taken of restoring the former physiological function; it is a question of removing the factors which are reflexly causing other symptoms. Chronic ulcerative endocervicitis with a leukorrheal discharge may be the

underlying cause of a heretofore unexplained neurasthenia. Probably, many of us are guilty of attributing the many complaints of some of our female patients to "neurasthenia", without satisfying ourselves as to the real cause of the nervous symptoms. The diseased area of the cervix is an excited station, which is constantly sending insulting stimuli to an already jaded nervous system. If the cervix can be restored to a condition approaching normal, there should be established a more normal functioning of the patient's nervous system, and, after all, this is the real function we are concerned with here.

We have considered this case one for surgical procedures; what, then, are the operative measures necessary? The relaxed vaginal outlet must be repaired in such a way that it will afford the most support. The first step in reducing the flaccidity is usually a cervical repair, which may be only a trachelorrhaphy,—a simple repair of an old cervical laceration. However, this does not do much towards reducing the redundancy of the vaginal mucosa. A high supravaginal amputation of the cervix is the operation of choice, which may be either a circular or double flap amputation. At the same time, and incorporated with it as part of the cervical work, an anterior colporrhaphy is done. The operation preferred here is the inverted T-shaped incision over the cystocele, denuding the cervical mucous membrane laterally, dissecting free the hernia sac of the bladder and reducing same upon itself, and suturing to retain the position secured after the redundant mucous membrane has been cut away. If a moderate degree of prolapsus uteri be present and associated with the cystocele, it may be the best plan to resort to the uterine transposition operation. The virtue of this operation lies in the fact that there is a complete change of the axis of the vaginal outlet accomplished and at the same time the herniated portion of the bladder comes to rest upon the transposed

fundus of the uterus after it has been reduced and secured by an anterior colporrhaphy. In this operation, after the amputation of the cervix, the incision is made over the cystocele and the anterior vaginal mucous membrane dissected free on each side and well up on the supravaginal portion of the cervix. When the operator is sure that the dissection has been carried high enough and the peritoneum on the anterior part of the body of the uterus is beneath his dissecting finger, an incision is made through anterior vaginal septum into the peritoneal cavity. The cervix is then retracted strongly posteriorly and the fundus of the uterus is brought into the field, of operation where it is secured by traction sutures. The fallopian tubes are identified and cut between double Pagenstecher ligature. This precaution of sterilization is taken because of the alteration in the position of the structures of the vaginal outlet. The fundus of the uterus comes to rest in the outlet of the incision for the resection of the anterior vaginal wall, beneath and giving support to the former cystocele. It is secured there by interrupted sutures, catching the free submucous tissue on each side and the fundus of the uterus in the middle. The operation is completed by resecting the redundant tissue and running suture of the anterior cervical mucous membrane.

The repair of the relaxed posterior vaginal wall is the keystone of the success attained in many cases of relaxation of the vaginal vault with ptosis of the uterus. As above, all operations upon the posterior vaginal wall are best preceded by a cervical amputation. The technique of perineorrhaphy will not be dealt with minutely, with the exception of a word about the rectal fascia. Identifying and bringing together by strong interrupted sutures the levatores ani muscles will not suffice; this should be preceded by a careful dissection of the rectal fascia as high into the posterior vaginal fornix as possible and the redundant part brought together in the midline with the interrupted

chronic catgut sutures. Care must be taken in passing the sutures in the rectal fascia that the rectum is not entered with the needle, thus contaminating the field of operation with the likelihood of infection. The levatores ani muscle and mucous membrane flaps are sutured in the usual manner, according to the operation decided upon.

If the uterine transposition operation has not been done, and the uterus is markedly displaced, the abdomen must be opened. Suspension of the uterus may be done by any one of several methods. The extra-abdominal shortening of the round ligaments, as in the Alexander operation, is mentioned, but is not advocated, because the operator can not be sure that a loop of intestine is not caught between the uterus and the abdominal wall. The Gilliam or Baldy operation is to be preferred; in certain cases of extreme retroversion, ventral fixation may be of service to insure the suspension of the uterus after the Gilliam or Baldy operation. While the abdomen is open, any necessary work is done on the ovaries. In a case, such as we are considering, it is not unusual to find chronic oophoritis, which is treated by particular excision of the ovary, and mattress sutures placed in the normal ovarian tissue to restore the contour and control hemorrhage. The appendix is usually removed.

The post operative care of these cases differs only from ordinary abdominal operations only in that the foot of the bed is elevated as high as the patient can conveniently stand it as soon as she reacts from the shock of the operation. The reason for this is to overcome by rest as far as possible the general ptosis of the abdominal organs. The patient is kept in bed in this position for three weeks, and upon discharge is instructed to wear an abdominal support which will assist in overcoming the visceroptosis. How far this succeeds can only be surmised, but it is more often the means of a sense of security and relief than it is outright failure.

To summarize,—

First, many cases of so-called "nervousness" can be traced directly to some abnormal condition of the pelvic structures.

Second, women who have borne several children, and who are near or beyond the menopause, often suffer from vague troubles which may be alleviated by correction of relaxed perineum, diseased cervixes, or displaced uteri.

Third, the years of these women's lives after the child-bearing period may be made far more comfortable by operative procedures to restore normal anatomical relations of their pelvic structures.

Fourth, with the restoration of normal anatomical relations, there will be restoration of the function of the parts in so far as each particular structure has a further function.

Fifth, many reflex symptoms can be cleared up by indicated operations upon displaced and diseased non-functioning organs.

Sixth, and last, no claim of originality is made for the remarks of this paper. It represents the possibilities which lie in this field of work, a field which is more often neglected than any other and for no apparent reason. In this day, we are doing more and more prophylactic surgery than at any other time, prophylactic in that it is reconstructive of the patient's health to a normal and saving an already tense nervous system from the further irritation.

SOME ABUSES OF CATHARTICS *

By B. H. BAGGOTT, M. D. Columbia, S. C.

Cathartics are drugs or agents which produce an increase in intestinal evacuations, some acting upon the upper portion of the canal, as Calomel, Colocynth, etc., others acting upon the lower portion, as Senna, Aloes, etc., and still others acting upon the whole tract as the Salines.

These agents act by increasing the mus-

cular and glandular activity, with increased peristalsis and abnormal outpouring of fluids. Cathartics are classified as:

Laxatives,
Simple Cathartics,
Drastic Cathartics,
Saline Purgatives,
Hydragogues,
Cholagogues.

It was formerly the practise of most physicians to give a cathartic as the initial remedy in every case seen. This practise is a dangerous one, for while it may do no special harm in many cases, there are many other conditions in which it may be attended with disastrous results. To mention a few of the more important of these:

ACUTE ABDOMINAL CONDITIONS.

There is a general idea in the minds of the laity, and, unfortunately, in the minds of many medical men, that any abdominal pain may be relieved by a cathartic. This is a very erroneous idea, and it is the duty of the medical profession to correct it.

When a patient is seen who has any type of abdominal pain the physician fails in his duty, and may do irreparable damage to the patient, unless he makes every possible effort to exclude a serious intra-abdominal lesion before he prescribes a cathartic.

WHEN THERE IS ANY POSSIBLE DOUBT HE SHOULD NOT GIVE A CATHARTIC.

In the presence of any inflammatory condition in the abdomen nature voluntarily brings about a condition of paresis of the bowel resulting in distending and splinting, thus aiding the process of localization of the soiled area.

For example, in acute appendicitis. At the onset of the inflammatory process nature begins preparing for an emergency. Should the process be mild these preparations may cease very quickly and the inflammatory condition subside without more than transient disturbance. On the other hand, as the severity of the condition increases and the inflammatory changes progress from an active hyperemia and swelling of

*Read before the Second District Medical Association, Edgefield, S. C., January 25, 1922.

the appendix to passive congestion, interference with the venous return flow from the organ, strangulation and finally gangrene, many marked changes occur. The omentum finds its way to the site of the lesion, there is a partial or complete paresis of the gut with diminution or cessation of peristalsis, and distension. Plastic lymph which has been accumulating since the onset, now begins to coagulate, sealing the omentum and distended coils of bowel together about the diseased area, usually more or less completely localizing the lesion and excluding the infection from the free peritoneal cavity. In the event of a perforation of the appendix with abscess formation, there is always a tendency to successful localization.

In view of these known facts, it may very readily be seen that any cathartic given will probably not produce the desired evacuation, unless used in very large doses, and that any effect it may have will be in direct opposition to nature's efforts to care for the situation.

Imagine a case of gangrenous perforating appendicitis with abscess formation, with the violent peristalsis produced by any cathartic; the small intestine in constant motion becoming soiled by contact with the infected area, in turn soiling an area of peritoneum which was uncontaminated, breaking up nature's adhesions, which at this stage, are only plastic, finally resulting in a general soiling of the peritoneal cavity and diffuse peritonitis, with its alarming mortality and increased morbidity and sequelæ.

When an abdomen in which these changes have occurred is opened, there is often pus between the omentum and parietal peritoneum, the pelvis and kidney fossæ being filled. The task of cleaning up such a case and removing the appendix is exceedingly difficult and, if the patient survives the operation, the possibility of metastatic multiple hepatic abscesses or subdiaphragmatic abscess and sepsis is so eminent that we cannot

be sure of his recovery for many months.

In contrast to this picture let us see the condition existing in these cases which have not been given cathartics. There is usually a completely localized abscess of varying size excluded from the free cavity by the omentum and adjacent bowel. This cavity can easily be sponged clean, a small wick inserted with no soiling of the peritoneum. The patient making a speedy and uneventful recovery.

Dr. Ochsner has recently made the statement that in his thirty years experience he has not seen a single case of diffuse peritonitis following acute gangrenous perforating appendicitis except in those patients who had been purged.

DISEASES OF THE GALL BLADDER AND BILE PASSAGES.

Acute diseases of the gall bladder may be primary or may be exacerbations of chronic diseases with or without stones. There may be no stones, one stone or many stones with infection of the gall bladder, the cystic duct becomes blocked by swelling of the mucosa or a stone acting as a ball valve; this is followed by enormous distension of the gall bladder with pus at times. The bladder wall is greatly thickened by edema and as the process advances venous stasis begins, often followed by gangrene and perforation. As in diseases of the appendix the omentum is on guard, the bowel is distended and sealed together by coagulating lymph in an effort to localize the infection and prevent general peritoneal soiling. Since the amount of pus escaping is often very considerable, nature has great difficulty in caring for it. Cathartics in these conditions, as in the various others mentioned, do no good and serve only to defeat nature's efforts.

INTESTINAL OBSTRUCTION.

Here again cathartics accomplish nothing, but by increasing peristaltic action may further traumatise a gut whose blood supply

has been seriously interfered with because of the constriction of strangulation. Certainly the patient's discomfort is greatly increased, while the hope that the cathartic will be effectual often causes delay in instituting surgical measures, thus depriving the patient of the one thing most valuable to him, viz. time.

ACUTE PERFORATING GASTRIC OR DUODENAL ULCER.

This accident is usually accompanied by more or less profound shock, due to the sudden soiling of a large area of peritoneum which has had insufficient warning. The protective mechanism is taxed to the limit in caring for this irritation and infection. One of the most valuable aids in the fight is the rapidly developing paresis and distention of the bowel, which, with the voluntary splinting of the belly wall tends to prevent the spread of the escaped intestinal contents. Cathartics should not be given in this condition as they will most certainly tend to break down nature's defenses, and produce disastrous results.

TYPHOID FEVER.

In this disease the lesion, consisting of ulcerations of varying depth and size, is found in the lower portion of the ileum. Clinically there is frequently a considerable degree of abdominal distention, due in part at least to nature's effort to reduce the activity of the intestinal tract to the minimum. Appreciation of this fact long ago led to practise of regulating the diet in the typhoid patient so as to lessen the work of the digestive apparatus to the lowest point consistent to the maintenance of his state of nutrition. In doing this we have done only half enough unless we refrain from the use of cathartics, which are capable of producing even more grave complications, per-

foration and hemorrhage than indiscretions of diet. Enemata should be substituted for cathartics in most typhoid cases.

CHRONIC HABITUAL CONSTIPATION.

Most physicians and patients feel that a great deal can often be done to overcome this annoying and more or less serious condition by regulation of diet, exercise, habits, etc. Unfortunately, however, both doctor and patient are too lazy to give these measures a fair trial. Resort is made to various drugs which appear to give better results and require much less effort on the part of doctor and patient. It must not be forgotten, however, that most of these remedies gradually lose their potency for the individual patient, forcing him to the use of more and more powerful cathartics, his habit all the while becoming more firmly fixed. The nervous and muscular mechanism of the bowel becomes as lazy as the patient and will not perform its function unless spurred on by some stimulant. Cathartics should not be given in this condition until hygienic and dietetic measures fail.

DIARRHEAL DISEASES OF CHILDREN.

In these conditions there is marked congestion of the intestines with violent peristalsis and increased glandular activity, nature's effort to get rid of the offending material. This excessive outpouring of fluids from the child's body rapidly brings about a state of dehydration, with the loss of a considerable proportion of the body weight in the course of a few hours. One of the greatest problems in the treatment of these children is replacing of this fluid. The use of all cathartics here is attended with very great danger and may be all that is needed to turn the tide against the child.

In a general way the same may be said of the administration of cathartics in diarrheal conditions in adults.

VESICO-VAGINAL FISTULA; WITH CASE REPORT OF SUCCESSFUL OPERATION ON FISTULA OF EIGHT YEARS' STANDING, PATIENT HAVING HAD FOUR UNSUCCESSFUL OPERATIONS.

By CHAS. J. LEMMON, M. D. Sumter, S. C.

A vesico-vaginal fistula is, as the name indicates, an opening in the bladder which communicates with the vagina. The fistulae vary much in size and location. (1) Some are small and surrounded by practically normal walls. (2) Some are large with loss of tissue. (3) Some are inaccessible and associated with extensive scar tissue and union of the bladder to the vagina.

The small fistulae surrounded by practically normal walls are the easiest to cure. The classical operation of Marion Sims is satisfactory for such fistulae. The operation is performed as follows:

The patient is placed in lithotomy position, the bladder is irrigated with hot boric acid solution through a catheter introduced through the urethra. An oval denudation is made with fine scissors about the opening down to the vesical mucous membrane. Special care being taken to trim off the cicatricial edge of the bladder opening. When the denudation has been cleanly and Symmetrically done interrupted sutures are introduced from side to side, being carried well into the vaginal tissues and down to the edge of the bladder mucosa; but not including it. The suture material used in the classical operation is fine silver wire. Eight to ten sutures are usually required. The sutures are removed in about fifteen days. During convalescence not more than four ounces of urine is allowed to accumulate in the bladder. The patient is catheterized every four hours for two days and then allowed to void.

A large opening with loss of tissue is a

more difficult proposition. The Sims method is not applicable. On account of loss of tissue the size of the fistulous opening cannot be approximated without marked tension which will interfere with healing. This difficulty must be overcome by turning in a circular flap and approximating its edges.

In accessible vesico-vaginal fistula even when small may prove very resistant to treatment, there being failure after one or more operations because its location interferes with accurate approximation of bladder wall to bladder wall. Such fistulae are usually situated about the vaginal vault and are drawn up and fixed by scar tissue.

The case I wish to report comes under this last class. The patient, Mrs. H., age 44, came under my care at the Toumey Hospital December 12th, 1921, with a vesico-vaginal fistula of eight years standing. It resulted from child-birth March 13th, 1913. The labor was long, lasting from Monday until Thursday. The foetus was hydrocephalic, the circumference of the head was 16 inches. She was badly torn and lacerated. There was no attempt made by the accoucher to repair the laceration. About two months later she went to a hospital and was operated upon four times unsuccessfully during her stay of about one year.

When I examined the patient I found that all of her urine escaped by way of the vagina, leaving the bladder empty and contracted from non-use. The cervix was fixed by the scar tissue from the deep tear of the vaginal vault. The fistulous opening was situated just in front of the cervix, and was firmly bound to the cervix. The large amount of scar tissue fixed in one mass, the cervix, the fistula, the base of the bladder, and the adjacent tissues, making the operation exceedingly difficult.

The essential features of the successful operation in such cases is to free the bladder from the cervix and vagina and scar tissue sufficiently to permit accurate closure of the bladder wall alone without tension. This is so easily accomplished in the normal

*Read before the Sumter County Medical Association, February 9th, 1922.

vaginal vault, that one who has worked only in pliable tissues cannot appreciate what difficulties are encountered in the presence of extensive scar tissues. In the case under consideration the vaginal wall was freed from the cervix and then from the bladder. The next and most difficult step was to free the bladder from the cervix. It was with much difficulty that the bladder wall was finally freed sufficiently to permit satisfactory infolding. The opening was closed with interrupted sutures No. 2 Luken's catgut, infolding the bladder mucosa. A purse string was next placed, using the same suture material, which approximated the ragged wall of the opening better than I could with any other suture. This was further reinforced with interrupted sutures into the bladder wall. The redundant vaginal mucosa was cut away and the wound closed with continuous No. 2 Lukens. A retention catheter was placed into the bladder. The wound healed perfectly. On account of the contracted condition of the bladder the catheter was kept in ten days. Each day the bladder was irrigated with hot boric acid solution. When the catheter was removed the patient urinated normally without difficulty. Urination was frequent at first, but the frequency diminished as the bladder capacity increased. She told me today, about two months after the operation, that she voids only three or four times during the day. The patient left the hospital fourteen days after the operation.

SUMMARY.

(1) The cure of vesico-vaginal fistula is best accomplished by making a proper dissection of the parts, so that they can be brought properly together without tension. (2) Non-absorbable sutures are not necessary. (3) The self retaining catheter is a valuable aid. The bladder should be irrigated daily as long as the catheter remains in the bladder.

TYPES, CAUSES, PREVENTION AND TREATMENT OF DIARRHEAS IN INFANCY.*

WM. P. CORNELL, M. D., Columbia, S. C.

When called to a case in which diarrhea is a, or the, main symptom, its classification under one of four main types will make its causative picture more clear, and its therapy more direct and rational, because, as it is not only a symptom, by this means we more quickly reach, attack and remove, its cause.

Etiologically we may classify the diarrheas as follows:

1. Mechanical. 2. Bacillary. 3. Par-Enteral. 4. Fermentative.

1. Mechanical: This type is seen particularly between the twelfth and thirty-sixth month, while the child is running about and before it acquires the habit of chewing its food. They get, and are given, articles of food which are not properly prepared for their digestion, coarse cereals and vegetables, seedy fruits with the pulp, etc. They bolt down these without breaking them up by chewing. They get to the ice cooler and drink rapidly long drinks of ice water, or are given iced soft drinks. The reaction from sudden chilling in the stomach is congestion. As at the "spring cleaning out" they are given large doses of intestinal irritants such as calomel and castor oil, on the suspicion that they have eaten something which, through its character or quality, will disagree, or, in a Par-enteral Infection with a loose stool the purge is given to "work off the cold."

Prevention rests on the realization of the fact that food stuffs must be thoroughly broken up by passing through a strainer until the child has learned the reason for chewing, or acquired the habit. Also, seeing that the child is sufficiently nourished by its regular table meals so that it won't become so hungry between meals that it

*Read before the Florence County Medical Society, February 22, 1922, Florence,

wants to eat everything it picks up. Parents must be educated that purgatives act by irritating the bowel, and warned against their indiscriminate use in large doses. Also, tell the parents of the congestive effect of iced drinks when swallowed rapidly.

Treatment: If some indigestible food has just (within two hours) been eaten, the inducing of vomiting, while it is still in the stomach, or a stomach washing, will remove it. Purges will force it onward.

If it has passed into the intestine, and produced congestion and irritation, as shown by pains or diarrhea, colonic flushings will either reach and remove it or they will empty the lower bowel and by so doing bring down the food mass where it may be gotten with a second flushing later, and this without producing further irritation and congestion as will certainly occur from a purgative.

During this time the giving of water freely will help pass the offending material and help allay the irritation.

2. Bacillary Type: This occurs primarily, and here appears suddenly in a previously well infant who goes down abruptly with fever, toxæmia and bloody diarrhea, with pus showing in the stained stool smear.

This type I believe to be much less frequent than is commonly thought.

Much more common than this primary type is, I believe, a secondary bacillary type in which, due to the congestion accompanying any form of diarrhea, the dysentery bacillus takes hold several days, to a couple of weeks, later. Here the pus in the stained smears gives evidences of an existing ulceration process.

I accept the theories of causation in the primary type as to infected milk, feces, flies and contact. In the secondary type I believe a common cause, which we are responsible for more or less, is the additional congestion produced and maintained by the action of purgative drugs during the first days of a simple non-bacillary diarrhea.

Prevention calls for strict cleanliness of

attendant's hands; the prevention of contact between the stools and flies through screening and disinfection, and the boiling of all cows' milk.

To prevent the secondary type from coming on during the course of a simple diarrhea our efforts should be directed towards bringing about as quickly as possible a lessening of the congestion already present in the intestine. Any inflammation, no matter where situated, demands first of all, rest, and we may secure intestinal rest best by a hunger period of twelve to twenty-four hours, during which time water or soda solution may be given freely. This will be discussed more under Fermentative Diarrhea.

The most important point, to my mind, and the one I wish to especially emphasize, is our faulty use of the irritants calomel and castor oil.

Any case of bacillary diarrhea is seriously ill with a germ infection, and our efforts will be taxed to maintain nourishment and strength until the infection has burned itself out. Our chief reliance is upon being able to maintain a sufficient food intake. A congested intestine cannot function properly in digesting and absorbing, therefore, anything that keeps up and makes worse a congestion must do harm and bring on a state of undernourishment and auto-intoxication.

Treatment: First, rest and water for 12 to 24 hours. Now our reliance is placed in food to maintain strength until the infection subsides.

Talbot and Morse have shown that the Shiga's and Flexner's organisms can feed upon either protein or carbo-hydrate, but when fed protein their toxins are very virulent, while, on the other hand, when fed carbo-hydrate their toxins are rendered non-virulent. On this basis we feed the sugars, such as Horlick's Malted Milk, Dextri Maltose or Mellin's Food, until the fever and toxæmia lessen and the infant shows interest in his surroundings and evidences of hun-

ger. We watch the child and not only its stools, these will assume a fecal character in a few days of sufficient nourishment.

3. Par Enteral Diarrhea:

This type is quite common and frequently unrecognized. The infant's digestive system is its weakest point and this gives way and the child reacts with diarrhea in many conditions which arise at a distance from the gastro intestinal tract.

Otitis, Rhinitis, Acute Adenoiditis, Stomatitis and Thrush, Difficult Dentition, Tonsillitis and Pharyngitis, Bronchitis, Dermatitis, Prickley Heat, the acute Exanthemata, Pyelitis and Cystitis, Balanitis, in fact almost any condition in fancy may cause the baby to react with a diarrhea. In many of these conditions the first evidence of trouble will be disinclination to eat, and we often make the mistake of persuading the child to eat against its desire, with resultant dyspepsia and diarrhea.

Prevention could, in many cases, be secured if we took notice of the preliminary loss of appetite and reduced the food strength, at the same time finding out what the Par Enteral infection was and checking it.

Treatment consists in diagnosing the cause, the Par Enteral Infection, and treating it, and reducing the diet until the infection has been overcome. As soon as this occurs the bowels will right themselves.

Certain it is that the mucus, which passes from the bowel after the administration of a purgative to "work the cold off of the chest," is not phlegm which has been coughed up from the lung. This is a very popular belief on the part of the laity. A mild looseness of the bowels is often converted into a serious diarrhea of congestion by the wrong use of strong purgatives in these cases.

4. Fermentative Diarrhea:

This type I wish to particularly emphasize because I believe it comprises the great bulk of the diarrheas of infancy and be-

cause its predisposing cause is one which we can successfully overcome.

As yet we have had advanced no theory of causation which completely connects up the obvious causes so that we could build thereon a plan of preventive treatment which could be universally applied with reasonable hope for success.

Mortality statistics for 1918 gives a total of 47,753 deaths from diarrhea and enteritis under two years of age, which is an average for the eight years, 1911 to 1918, inclusive, of 63.9 deaths per hundred thousand population throughout the registration area.

This is a higher death rate than occurred during the same period, including all ages, from all of the following diseases combined: Typhoid Fever (15), Malaria (2.4), Smallpox (9.2), Measles (9.8), Scarlet Fever (5.2), Whooping Cough (10.9), Diphtheria and Croup (16.2), and Infantile Paralysis (including the recent epidemic which caused such terror) (2.5), a total of 62.2 per hundred thousand population.

What the mortality rate of this disease is I have been unable to ascertain. If it is ten per cent then there must occur about half a million cases each year, and if it is about five per cent, which I should judge to be a closer estimate than ten per cent, then there must occur annually in our registration area one million cases amongst our infant population. Probably every mother of children has been subjected to this trying ordeal. Probably no other disease of such magnitude, in point of incidence and morbidity, has so little attention and systematic study paid to it.

My arguments are based upon the following quotations from the last edition of *Holt's Diseases of Infancy and Childhood*, page 352. He says, under the subject Diarrhea: "Artificial feeding is an etiological factor of the first importance. Less than 5 per cent of the serious cases of diarrhea are amongst the breast-fed, and fatal cases among the exclusively breast-fed are really

rare, no matter how bad the surroundings or how ignorant the mothers."

He further states: "But all the other factors mentioned—artificial feeding, overcrowding, bad hygienic surroundings and neglect—exist the year round, yet diarrheal diseases are prevalent only in summer. We must therefore consider the direct or indirect effects of atmospheric heat as the primary exciting cause of paramount importance, the other conditions acting as secondary or predisposing causes."

These secondary or predisposing causes act at the same time upon the breast-fed, but without effect, and it escapes, so that we have left the two factors, artificial feeding and summer heat, and it is my aim to offer an explanation of the relationship and reaction between these two causes which affords, if accepted, a rational and ready means of prevention of the continued high occurrence and death rate.

Of these 47,753 annual deaths under two years of age, 77 per cent, or 36,807, occurred in the first year or nursing period, and presumably 95 per cent of these, or 34,966, plus the many recovered cases of which we have no record, fall into the class of the artificially fed, upon whom preventive measures might have been exerted.

What then is the causative picture of these artificially fed babies who, in their first year of life suffer from diarrhea as the direct result of summer heat? Why does summer heat affect the artificially fed and spare the breast-fed baby?

I believe it is because the baby fed artificially is, in most cases, fed upon one of the so-called baby foods with which our markets are flooded. These all are, for the most part, too rich in sugar and deficient in albumin or protein, and it is this too low protein intake which causes the infant to consume its own body protein in which resides its strength, resistance and vitality, so that the depressing summer heat prostrates it and produces a faulty metabolism with systemic illness, relaxation and diarrhea.

I cannot agree with the man who pictures these cases as bacterial in origin, and Mortality Statistics for 1919 seemingly bears me out in that it reports only 560 deaths in the first year of life from dysentery, the disease usually returned when the physician believes that there was a germ infection, as against 26,896 deaths for the same age returned as Diarrhea and Enteritis.

That bacteria have played an important part in the past is not, to my mind, proven by the steady though slow drop in the mortality statistics, for at the same time the importance of the use of cows milk has been stressed so that more babies have gotten protein in their diets with consequent increase in their resistance.

The rationale of the preventive measures here suggested rests upon the theory that protein starvation with subsequent loss of vitality and resistance forms the connecting link between the two recognized causes, artificial feeding and summer heat, as stated by Dr. Holt. It will also, in most cases, explain the so-called parenteral infections, because it is the poorly nourished infant who most frequently suffers from colds in the head and chest, rickets, anaemia, and other milder ailments as teething, thrush, prickly heat, etc., which so often show their constitutional effect by the child reacting with a diarrhea.

A typical case would present a history somewhat as follows: A child, born healthy, is nursed for several months, then put upon condensed milk, or one of the other so-called baby foods. It gets fat and appears to do well, but the mother notices that its color is not quite right; that it doesn't seem quite strong in standing or sitting; its stomach looks larger than it should and seems to have more gas in it than while on the breast; it may catch colds easily; may be restless at night; it may want to feed often and at irregular times. A hot spell of weather comes along and it becomes cross and restless, and has a wakeful night during which it is given the bottle several times

to pacify, and by morning it spits up or refuses its bottle and passes a loose stool maybe greenish in color, and with some slime, which irritates the buttocks. It feels warm and feverish and is cross.

The mother, thinking it a mild upset, gives a good dose of oil. The chances are that it is anything but a mild upset, and that the oil will do positive harm. This baby has been sick for a long time; the previous pallor and muscular weakness have been evidences of a malnutrition in which every organ and tissue in its body has shared, especially its digestive tract, and, being prostrated by the heat, its digestive system, having been under continuous strain, shows the first signs of disease through vomiting and diarrhea. The power to absorb is affected at once with the result that the rich sugary food lies in the intestine and allows the bacteria which feed upon sugars to ascend from the lower bowel and attack these sugars and ferment them with the liberation of great quantities of acid gases. This acid state inhibits the action of the intestinal ferments which can act only in an alkaline medium and we have inability to digest added to inability to absorb. These acids further irritate and congest the lining of the intestine, causing it to produce great quantities of mucus, and also causing it to try and rid itself of the irritating contents through diarrhea.

The baby is suffering constitutionally, not locally, from a toxæmia generated in its tissues through faulty metabolism; from the rapid drainage of tissue fluids and salts, and from acute starvation due to checked digestion and absorption of food.

The diarrhea is not the disease but only a symptom of the severity of the intestinal irritation, and I believe nature suits its degree to the severity of the irritation and the strength of the infant. Another effort of nature's is an attempt to lessen the acidity of the intestinal contents by giving up of the alkaline salts in the tissues to neutralize this acidity, and a grave danger in

a very severe diarrhea is that so much alkaline salts will be abstracted as to bring on an acidosis.

Treatment should be separated into active and preventive. Under preventive we should first insure breast feeding, thus making sure of a diet balanced with proper protein which builds up the body tissues and resistance. Over 90 per cent of mothers can nurse their babies successfully if properly instructed how to maintain their breast secretion. This has been definitely proven.

Secondly, if weaning becomes imperative, see that the baby gets cow's milk. This is the only source of protein aside from breast milk. This should be boiled in all cases, and diluted to suit the baby's age and weight, and condition of health. A constant check must be kept by frequent weighings of the baby, and the strength of the milk changed as indicated.

As to the active treatment of a developed case of diarrhea: Our commonly accepted principles of treatment in the past have been starvation, purgatives, and opium or bismuth to check the diarrhea. The starvation was continued while the stools appeared bad and, if they did not immediately (within twenty-four hours) get better, the purge was repeated, until finally resort was had to opium and bismuth to check the diarrhea, even though mucus and blood were still passing. About this time we would suddenly realize that the baby was dying of starvation and change from the egg water, or barley water, which we now know contain practically no food at all, and try to force down something to sustain life. The death rate was only too high!

Today we recognize the systemic character of the disease and that the baby's blood and tissues are being rapidly drained dry. We recognize the congested condition of the intestine and the danger of the diarrhea, and we fear to increase this congestion and diarrhea by the giving of a purge which acts only through irritation. We know that what is needed by the inflamed bowel, as

in all other inflammations, is rest, not irritation, and we secure this and at the same time help nature clean out the intestine, by giving a weak, watery solution of soda in liberal quantities for twelve hours. The soda helps neutralize the acidity and so checks the drainage of alkalies from the system and prevents an acidosis, and the water dilutes the irritating acid contents and checks the drainage of water from the tissues or takes its place. In twelve hours the infant is usually better, less toxic, and showing evidences of hunger and interest in its surroundings. Now we start nourishment, realizing that its digestive capacity is still way below normal. Knowing that the germs, which feed upon sugars and starch and produce acid fermentation, are in great excess, we feed protein, which brings about the opposite conditions to fermentation. The special protein food for this purpose is protein—or albumin-milk, which has a low sugar and whey-salt content. On this the reaction of the stool rapidly changes from acid to alkaline. We let the diarrhea alone as it will usually stop of itself in about a week. We give nothing to check the diarrhea so long as the child manifests the symptoms of improvement as shown by hunger, bright intelligence and interest in his surroundings. In a few days we begin to strengthen the food to keep up with the increasing digestive capacity.

No longer do we give the nauseating medicines formerly employed, instead we instruct the mothers as to the causes and prevention, and ask her to spread the information to other mothers whose infants may be included amongst the possible million to be stricken down that year.

In conclusion I offer the following propositions:

That Diarrhea in Infancy is caused, in the great majority of cases, by protein starvation brought about by premature weaning, followed by the improper use of the proprietary infant foods; by summer heat; and the giving of purgative drugs.

That Diarrhea in Infancy can be prevented in the great majority of cases by prolonging the nursing period and by the feeding, after weaning, of a properly prepared cow's milk mixture.

That Diarrhea in Infancy can be most successfully treated by proper dieting and the avoidance of purgative and sedative drugs.

SPLENO-MYELOGENOUS LEUKEMIA*

By Goodman Bare, M. D., Starr, S. C.

Male, age 36, American Farmer, always lived in Anderson County, married.

First seen on December 3, 1920.

Chief Complaints:

1. Burning pain in feet for fourteen months.
2. Weakness for two years.
3. Dyspnea and unable to lie down for one week.
4. Palpitation of heart for one week.
5. Dull pain in side for two months.
6. Chronic constipation for two years.
7. Anorexia at intervals for two years.

Family History:

F & M. L & W. (Father and Mother living and well.)

5 B. L. & W.

4 S. L. & W.

Wife L. & W.

No children.

Cancer & Tb. neg.

Nervous Diseases neg.

Heart & Kidney Diseases Neg.

Past History:

He had measles, mumps, and chicken pox in childhood with no complication, scarlet fever neg. diphtheria neg. Tonsillitis neg. Small pox neg. Malaria neg. Tb. neg. Venereal Diseases neg.

He had typhoid fever at seventeen and recovered with no complications. He had one attack of rheumatism at thirty years in right leg with no complications.

He was operated on for appendicitis at thirty four, after this operation he was never stout again. He had a light attack of influenza at thirty four with no complications.

No Accidents.

Personal History.

*Read before the Anderson County Medical Society, February 8, 1922, Anderson, S. C.

Appetite poor for last two years, meals regular. Coffee 2C. a day, Smoked a few cigarettes, sleep poor, nervous, constipated, Urine d-4—N-2. Home condition good. Farm work.

Present History:

After his operation for appendicitis he did not regain his strength. He felt weak and tired easily. He was constipated and had to take drugs all the time. He had periods of anorexia for two or three weeks alternating with periods of increased appetite, during this time he would feel better. He sought medical aid for his weakness and constipation with some improvement for a little while.

Then his feet began to burn at night and this burning pain grew worse; was unable to sleep. He was treated by a physician who relieved him at first but this burning pain soon returned and became continuous day and night.

He had a dull pain in left side for two months and for the last week shortness of breath and palpitation. His ankles would swell in the evening for about two months.

He had no eruption, no sore throat, no dysentery, no disturbance of vision, no fever, no night sweats, no chills, no paralysis, no trouble with urine. At times he worked a little in 1919, but was unable to work in 1920.

He sought medical aid in 1918 for his weakness and constipation and has been treated ever since by one physician then another for indigestion, chronic constipation, pellagra, Bright's Disease, and T. B., with no improvement.

Physical Examination:

Patient looked sick, lying in semi-prone position in chair, a well developed man of about thirty five years, weight about 135 pounds, 5 feet 8 inches tall, brunette, respiration shallow and rapid, mental condition good

Skin: The skin of face and neck was red, especially the cheeks, no eruption, no pigmentation.

Head: Normal conformation, no tumors, no paralysis, no scars, scalp neg.

Eyes: External ocular movements normal, no exophthalmos, conjunctiva red, no inflammation, sclera icterus, pupils equal and react to light and accommodation, vision good.

Ears: Neg. **Nose:** Neg.

Mouth: Lips red, no herpes, no mucous patches, two carious teeth, no pyorrhea, tongue red and clean and protrudes in mid line with fine tremor, throat red, tonsils neg.

Neck: Slight carotid pulsations, no tumors, glands not palpable. Upper Ext. Neg. Hands, Fingers and Nails Neg.

Chest: Broad and deep, no eruption, no scars, slight emaciation, respiration shallow, rate 24, skin normal.

Lungs: Neg.

Heart: Normal in size, slight upward displacement, sound distinct, with a presystolic murmur over mitral area, A2 greater than P2

Abdomen: full, slight emaciation, no eruption, skin slightly icterus, scar on right lower quadrant, no visible tumor. On palpation the edge of the liver could be felt two inches below the costal margin. Gall bladder not palpable, not tender. On the left side you could feel a mass which was hard and notched, and extended down as low as the middle of the left lower quadrant, and medial to three inches of mid line, tender on pressure and dull to percussion. Tympanic note over right and lower abdomen.

Genitalia very small. Rectum neg.

Lower extremity: Well developed, skin normal, no eruption, no paralysis, feet and ankles oedematous, nails blue, pressure on feet and ankles produce severe pain. He complained of pain on deep pressure over bones of legs, reflexes normal.

Temperature 99.4-5.

Lab. notes:

December 3 Urine Anal.

S. P. 1014, clear, amber, acid, no sugar small amount of albumen, Microscopic; a few granular and hyalin casts, no bacteria.

December 4. Blood count:

Red cells, 3,800,000.

White cells, 45,000.

Blood pressure, 140-90.

Blood Wasserman, Neg.

December 6. Urine Anal.

S. P. 1020, clear, straw, acid, no sugar, small amount of albumen.

Blood Count:

White cells, 52,000.

Differential Blood count; Polynuclear neutrophils 64 per. cent.

Mononuclear neutrophils or myelocytes 12 per. cent.

Mass cells 2 per. cent., eosinophiles 1 p. c.

Small lymphocytes 16 per. cent.

Large lymphocytes 5 per. cent.

Blood pressure, 145-85.

December 9:

Blood count; White cells 67,000.

Diagnosis:

Spleno-Myelogenous Leukemia.

Based upon:

Differential blood count, white and red blood count, Enlarged spleen, enlarged liver, tender over long bones of legs, Urine Analysis, Pain in left side, Anorexia, Dyspnea, Palpitation, Slight Emaciation, Sclera and skin of abdomen slightly Icterus, Rapid breathing, Heart rapid, Presystolic murmur over Mitral area Feet and ankles oedematous, Toe nails blue and gangrene following, Weakness, Pain in feet.

Atypical Symptoms:

Skin of face red, Lips red, Constipation, No tryapism, No hemorrhage in mucus membrane, No headache, No disturbance of vision, and no history of Malaria.

Treatment, Was purely Symptomatic.

Course of Disease.

During first week he improved, The constipation, dyspena, and palpitation was relieved. His heart slowed to 100 and his appetite increased. The burning pain in feet was relieved only by morphia but gradually grew worse and his toe nails began to turn back.

Temperature 99-101.

In the second there was practically no change in his condition, the pain in feet and toes increased and the right little toe became gangrenous. Temperature 88-100. Mental conditions good.

During the third week the three lateral toes on right foot and little toe on left foot became gangrenous. The pain in toes diminished with the spread of the gangrene while the pain increased in his feet. The pain in left side increased. His appetite diminished and he began vomiting. The Dyspnea and palpitation gradually returned. He grew weaker, voided with difficulty and became constipated.

Temperature 99-100, Pulse 120.

In the following week the gangrene spread slowly and of a dry form. The dyspnea increased, he became stupid. Was unable to void.

Temperature 99-101, Pulse 130.

During fifth week the toes on right foot sloughed. He became comatosed followed by death at end of fifth week.

No Necropsy.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
Superintendent State Training School,
Clinton, S. C.

PSYCHOANALYSIS

Of all systems of psychotherapeutics, the most widely known and most used by physicians is the system based on Freud's theory of psychoanalysis. But the Freudian theory is not very well understood, either by advocates who grossly exaggerate its significance and possibilities or by opponents who refuse to take it seriously.

The wish is the starting point of the Freudian psychology, but the word "wish" usually refers to a trend or tendency rather than a conscious wish. We recognize in conscious life that our various wishes are sometimes in opposition, that we have trends and counter-trends in motives. The strongest desire, at a given time, may be the completion of a certain piece of work in a given time limit; but the mechanism of the work may be so unpleasant and the desire to be doing something else may be so strong that the attention frequently wanders from the matter in hand, and has to be brought back with conscious effort. According to Freud this conflict among opposing wishes or tendencies is much stronger in our subconscious mental life than we are aware of, so strong as to be dangerous to our mental equilibrium. The thwarted and repressed desires of childhood have a tendency to form a sort of mental abscess, and give rise to various neuroses. The obstruction to free action may be removed by leading the patient to trace the blocked pathway to its source, and this is done by systematic study of dreams. As a preventive measure against nervous breakdowns, the habit of free expression should be encouraged in childhood. The instincts of young people should not be sup-

pressed, but should be sublimated and directed into proper channels.

The symbols of Freud are suggestive, but some doubt that they are wholly convincing may still be expressed, since in many cases the laws of association are quite sufficient to account for the presence of a given object in dream consciousness. Psychologists, possibly for the most part, do not follow Freud in the emphasis which he has placed upon the motive of sexuality as opposed to all other possible motives, but they acknowledge indebtedness to him for calling attention of the significance of the motive and the importance of ascertaining it. They must credit him with the important step of advancing psychology from the descriptive to the interpretative stage.

As a method of psychological research, the theory probably has its limitations. One of Freud's patients took serious exception to his statement that every dream expressed the fulfillment of a wish. When she related a dream bordering on nightmare, he replied: "It was your wish to have a dream that would refute my theory." It may be granted that this patient wished to have an unpleasant dream with which to oppose the theory, but the number of possible unpleasant dreams one might have is practically unlimited. With the amount of satisfactory proof to be offered, we are still unable to reconcile some of the writings of him and his disciples with practical applications of psychology. Much of his work, however, is so convincing that the student of psychology need seek no further proof of its claims, and may find it invaluable in reaching some of the most difficult cases with which psychologists have to deal.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

THE MENACE OF THE MALARIA CARRIER

The average physician treating a case of Malarial Fever considers his patient cured, just as soon as all clinical symptoms have disappeared, and beyond prescribing a harmless "strengthening tonic" promptly proceeds to forget about the case.

An intensive study of Malaria recently made in a few Mississippi counties revealed the fact that more than 50 per cent of all persons who have attacks of Malaria during a given year have RELAPSES and not new infections.

Similar investigations elsewhere have shown practically the same results—the numbers ranging from 50.77 per cent to 68.86 per cent.

This means that the majority of cases of Malaria are improperly treated. This is especially true of the large numbers of cases who do not even consult a physician, but treat themselves with so-called chill and fever tonics.

When we remember that the only source of Malaria to man is the infected Anopheles mosquito, and that the only source of Malaria to the mosquito is the infected man, we can realize that every case of Malaria is a potential menace to his family and to his community until he has become entirely cured of his infection.

Bass claims that nine-tenths of the Malaria would be gone in ten years if the doctors would only cure all the cases they treat, and that this result would be seen in three years if every individual who treated himself for this disease would continue the treatment until he has lost his infection;

and he bases his statements on actual results obtained in Sunflower County, Mississippi, where a 90 per cent reduction of Malaria followed an intensive treatment campaign.

One of the reasons for the failure to disinfect patients who are infected with Malaria is the lack of a standard effective method of treatment.

While the action of Quinine upon Malaria represents one of the most perfect specifics in medicine, the drug must be given properly in order to get results.

The National Malaria Committee, of which the Surgeon General of the United States Public Health Service is Chairman, has adopted and proposed a standard treatment of Malaria. This treatment is based upon a great many experiments which conclusively proved that the average person suffering from Malaria was not freed from his infection—even if properly treated—in less than eight weeks. It also takes into consideration the smallest doses that can be given with safety.

For the acute attack, they recommend ten grains of Quinine Sulphate by mouth three times a day for a period of at least three or four days, to be followed by ten grains every night before retiring for a period of eight weeks. For infected persons not having acute symptoms at the time, only the eight weeks treatment of ten grains nightly is required.

Considering the enormous economic loss in South Carolina occasioned by Malaria, and realizing our peril from the improperly treated cases, we should devote our attention to the Malaria carrier—the real menace of the South.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

IMPORTANT FACTORS IN PROSTATECTOMY

The operative technic of prostatectomy is simple, especially if done suprapubically. It does not require exceptional operative skill, but adequate knowledge of the methods of preliminary treatment, and a fundamental knowledge of renal, bladder and prostatic pathology, obtained through the application of urological procedures, to do prostatic surgery as it should be done. It was many years, however, before the profession realized that such was the case. It was thought that the exceptional skill of the operator was the main factor. We do not wish to convey the idea that the technic of operation is not of great importance. It is important, because, outside of general surgical principles involved, functional restoration depends upon a good technic. The successful outcome of practically every case that is operated on depends more upon the pre-operative treatment, however, than upon the operation itself as performed by the average operator.

Prostatectomy is never an emergency. Relief of the acute retention is the emergency. This can usually be done with the catheter. The bladder with a large residual should be emptied gradually, sometimes waiting a week or more, to avoid death from uremia.

The examination of a patient for prostatectomy should, at least, include the following: General condition, heart, blood vessels, blood pressure, specimen of blood for Wassermann, teeth, blood chemistry, especially for urea; examination of the urine, amount of residual urine, renal functional activity with phenolsulphonephthalein, cys-

tescopy, unless there is a contraindication which occasionally exists.

If there is a heart lesion, complete restoration to compensation is all that is required for operation. High blood pressure and arterio-sclerosis do not in themselves contra-indicate operation. If syphilis is present, it should be well treated before the operation. Extensive renal destruction, renal infection and lithiasis, atony and carcinoma of the bladder make prostatectomy inadvisable. There frequently exists marked renal impairment in prostatitis but this is usually due to the so-called "back pressure" and the kidney function will markedly improve after instituting drainage and other aids. It may rise from zero 'phthalein in two hours to 30 per cent or more after drainage.

A close study of renal function is a most important factor in prostatic surgery. Urine should be examined carefully and repeatedly; repeated functional tests with phenolsulphonephthalein and blood urea estimations should be made. The kidneys must be found by these examinations to be in a stable condition. This is vastly important. A prostatic is a better risk with a constant low function than one whose renal function is sometimes high and at other times not so good. Such a person would likely die of uremia, which is the most common cause of death in surgery of the prostate. However, we must not rely upon any one sign or symptom in deciding whether or not a patient is a fit subject for operation.

Removal of foci of infection, such as oral sepsis, will often improve the patient's general condition and make him a better risk for operation.

Upon the pre-operative treatment, properly and sufficiently given, the life of practically every person who is operated on for

hypertrophy of the prostate rests. Some patients from one reason or another require it for a year or more; some only a few days. It is seldom that we see a case that is in fit condition for operation without instituting pre-operative treatment. A person with a small residual urine and no infection, and a constant high renal function, and general condition excellent would be a good risk. Seldom do we see such a person. There is a type of prostatic that is an exceedingly bad risk for operation, namely, one with an enormous residual urine which is free from infection. Hydro-ureter and hydronephrosis are usually present in such cases, and the patient would almost surely succumb to infection of the kidneys if the proper treatment preliminary to operation is not given and for a sufficient length of time. The following special considerations must be had in preparing patients: 1, drainage; 2, diuresis; 3, acidosis.

Drainage, we think, can best be done with the indwelling catheter. If there is soreness of the parts, intermittent catheterization usually suffices. If both fail, suprapubic cystostomy must be done. This is seldom the case. While some good urologists do preliminary cystostomy in every case, and in their hands it is safe, the vast majority of leading urologists use the inlying catheter unless they find it not practical.

Diuresis is important. Three or four quarts of water should be taken internally every twenty-four hours. If it cannot be taken internally, give per rectum, or by hypodermoclysis, or intravenously in proper amounts. Give water freely. Crile states, "Water is the vehicle in which the mechanism of man is suspended, and without fresh water it cannot exist. If the patient cannot receive water, if his tissues fail to absorb and use water, it does not mean that the water has failed; it is a sign rather that

the organism has failed, and that irrevocable dissolution is in progress."

Acidosis can be combated by the use of alkalies, sufficient quantity to sodium bicarbonate to render the urine alkaline, with glucose as an adjunct if necessary.

Urinary antiseptics have a doubtful value. Urotropin, the best of them, is sometimes given. Careful attention should be paid to the elimination through the intestines. Saline laxatives are very good.

The post-operative treatment is also very important. It is not the purpose of this paper to dwell upon the details, but to bring out some of the most important general principles that guide us in surgery of the prostate. Observance of the above principles will reduce the mortality from 20 per cent and above to about 4 or 6 per cent in surgery of the prostate.

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SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

DRAINAGE OF THE COMMON DUCT PER OS

Some 10 or 12 years ago, Meltzer, while doing animal experimentation work at the Rockefeller Institute, noticed that when a solution of magnesium sulphate was placed in contact with the duodenal mucosa, the gall bladder contracted and the sphincter muscle of the common duct at the ampulla of Vater, dilated or relaxed, and bile was automatically pumped from the gall bladder and common duct into the lumen of the bowel.

Several years later, Lyon, of Philadelphia, conceived the idea that the above being true, he could make practicable application of the same, in the treatment of catarrhal jaundice and other pathological processes of a catarrhal nature in the gall bladder, hepatic, and common ducts..

From this has evolved the very simple process of draining the biliary canals by passing a long slender rubber tube, with a metallic bulb on its end, through the mouth, down the gastro-intestinal canal, into the duodenum, and then injecting magnesium sulphate solution directly into the duodenal fossa.

He has treated hundreds of cases of catarrhal jaundice with this technique, shortening the convalescence, with disappearance of the jaundice, from an average of 35 days, to an average of from 5 to 8 days.

Dr. William H. Sheridan, recently of Philadelphia, but now of Spartanburg, S. C., has observed many cases treated in this manner and speaks very enthusiastically of

it. Only a day or so ago, we saw him remove 12 ounces of bile, at one sitting, from a young man who was acutely sick with pain and tenderness over the gall bladder region, temperature of 102, and a deep jaundice of five days standing, which came on following the subsiding of an acute tonsillitis. It is reasonable to presume that the pathology in the gall bladder and its ducts, was secondary to the tonsillitis, and in all probability the doctor will cure the patient of his illness by this drainage technique.

This simple operative procedure is practically free from danger, is done without an anaesthetic, permits of cultures being made from the bile, and treatment by vaccine. It offers possibilities of cure of acute and chronic cholecystitis, acute and chronic cholangitis, and may and should be used by surgeons to insure complete evacuation of the biliary passages, from time to time, for several months at least, after cholecystectomy, until anatomic and physiological changes have taken place sufficient to guarantee proper function of the remaining structures.

Joslin, of Boston, warmly advocates this treatment in all cases of diabetes. He insists that after the patient has reached the highest food tolerance, biliary drainage with concomitant pancreatic drainage is of value, as he believes that the pancreas is an etiologic factor in diabetes.

This method is also of use in treating certain types of gastric ulcer, especially the acute, by feeding the patient food direct into the duodenum, this putting the stomach at complete rest.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

SOME NEW PROBLEMS IN SYPHILIS

Dr. Smith wrote a very interesting article in the Archives of Dermatology and Syphilology November, 1920, on the vanishing lesion in the treatment and teaching of syphilis. From this paper and the discussions on the subject it would seem that the men treating this condition have noticed a great change in the present day manifestations of syphilis from what it was ten to fifteen years ago. This condition is said to be due to four causes: (1) early diagnosis; (2) better treatment; (3) prohibition, and (4) education. Due to these four factors syphilis is now recognized early, and most instances at least one intensive course of salvarsan is given. This vanishing lesion or in other words this growing scarcity of the secondary and tertiary lesions noticed in the clinics for teaching is not the real thought that this paper presents to me.

The real problem is the changing attitude of both the physician and the laity to the seriousness of syphilis. Since we do not see so many of the horrible manifestations of the disease that we once saw, I fear that we are all prone to take the condition more lightly. Since the cases of tertiary and secondary syphilis seen today are more rare than they were ten years ago, is not sufficient reason to conclude that the late nervous manifestations of syphilis should be looked at with any less serious thought than they were then. Sufficient time has not elapsed since the introduction of the salvarsan treatment (about twelve years) to say definitely whether we have a sure cure for the disease or not. It is very true that much data point to the belief that we can with the present day methods cure syphilis. Many

cases have been observed from ten to twelve years with entirely negative findings. It is reasonable to conclude that if we continue to treat syphilis with as much apparent success as we have had in the past twelve years that the disease will continue to decrease in virulency, its manifestations to be less pronounced, complications less frequent and less severe; finally the condition passing on to one of less importance as has many other conditions that in recent years have been treated with so much success.

That of course is the ultimate goal, but in the mean time we are still dealing with a severe blood disease that is capable of great damage to the human being. The disease is undergoing changes and for that reason I am prone to believe that the average physician of today knows less about present day syphilis than he did ten years ago. To treat the disease wisely and efficiently we must be cognizant of these changes. The doctor who waits for the typical signs of syphilis that he learns from the text books in order to make a diagnosis will miss many cases. At one time we were taught to wait for the secondary eruption before making a diagnosis, now we feel that we have cruelly neglected our patients if a secondary eruption is allowed to develop. At one time for a doctor to make a diagnosis of chancre certain typical signs were necessary, now it is our duty to suspect all sores of the genitals for leucic infection.

Granting that the manifestations of syphilis have changed, and that we are not as efficient in making a diagnosis from the clinical symptoms as we once were it becomes necessary to use the laboratory. Just here I wish to emphasize the dark field examination and urge all to use it more and more in the diagnosis of syphilis. Every

genital sore should have a dark field examination and suspicious sores should have repeated examinations. I think one is justified in treating a genital sore for a week or more with only a wet saline dressing if he is suspicious of the sore being luetic and

he makes repeated dark field examinations. We wait months for a positive Wassermann, and a positive Wassermann is not as absolute as a positive dark field. Too much stress cannot be laid on the importance of the dark field.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

The successful therapeutic use of radium has caused the layman to feel that this agent constitutes a panacea for all human ills, while one or two unfortunate experiences in which the patient failed to be improved have caused some practitioners to belittle and actually become actively antagonistic to the use of Radium.

But there is a fine broad, useful middle ground that the medical man may travel with safety and with untold comfort and relief to the patient. A basal cell malignancy may be handled promptly and efficiently with radium; numerous non-malignant conditions are very amenable to radium; and if the physician using radium could do no more than to stop the hemorrhage, the foul smelling discharge, and prolong the life of the patient having an inoperable cancer of the cervix, the high cost and the special training necessary to the use of radium would be well worth while. The Cautery, in malignancies of the cervix will in the future probably be discarded, because radium will do all the things that the cautery

does easier, with rapidity and with greater hope of permanency.

* The topical application of radium to metastatic nodules in the supra-clavicular fossæ after breast amputation often meets with brilliant results and gives the patient from six months to one year longer to live. So it is believed that if radium only brought comfort to these persons who are surely going to die, making the last moments of life bearable for the patients themselves and less hideous for the patients' loved ones, its use would be well worth while.

Probably the brilliant achievements that are accredited to radium will be far surpassed by the results that will be attained at a later date when the laity and the profession recover from the idea that the mere possession of radium equips the possessor with a knowledge of its application. And if the radium therapist will learn the lesson that the surgeon has learned, and select his cases more carefully, the name of Radium will become more blessed.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
Medical College of the State of South Carolina,
Charleston, S. C.

SYPHILIS OF THE MYOCARDIUM.

Syphilis, as one of the most important factors in the development of arteriosclerosis, is too frequently overlooked in consideration of diseases of the cardiac musculature. A disease which commonly affects arterial and venous channels can very reasonably cause serious changes in the myocardium, and, as a matter of actual fact, syphilis very frequently does give rise to changes there which may, by themselves, cause death.

Syphilis of the myocardium most often manifests itself as a chronic myocarditis, and, according to its distribution, may be either diffuse or localized. In the former there results a generalized fibrous myocarditis almost indistinguishable, in its gross appearance, from non-syphilitic cases. In the early stages there is a profuse infiltration of small round cells and proliferation of young connective tissue in more or less regular lines or bands through the cardiac muscle. As the process ages, the round cell infiltration largely disappears, excepting around the blood vessels, and the fibrous tissue increases greatly in quantity and is now between the individual muscle fibres, so that there is a uniform distribution of the newly formed tissue. As this tissue ages, it contracts (as in scar tissue), thus offering some impediment to the ordinary function of the musculature and resulting in a diffuse hypertrophy of the heart. This stage may be compatible with sufficient heart function to sustain the life of the individual until the time comes when atrophy and replacement of the muscle fibres occur as the result of overgrowth of fibrous tissue.

The localized type of reaction to syphilis

in the myocardium is precisely the same in the beginning and development as in the diffuse form except that the process is limited, usually, to a small area and the amount of new tissue formed in this area is much greater than it is in an area of the same dimensions in the diffuse type. Therefore, with such dense formation of scar tissue in a more or less localized area, and because of the lack of elasticity of fibrous tissue, the conditions are very favorable to the development of an aneurysm of one of the heart cavities.

These two types of myocardium are presumably the result of toxins liberated by and contained in the *Spirochæta pallida*. They may, however, occasionally result from other intoxications.

Still another type of localized myocarditis resulting from syphilis is to be found. This is the formation of gummata. Gummata or tertiary syphilitic lesions, are very rarely noted within the walls of the heart, and, those reported in the literature seem, almost without exception, to have been associated with gummata in other parts of the body. These lesions of the myocardium vary much in size and shape but the average size is slightly less than one half inch in diameter, and they most frequently occur in the wall of the left ventricle. They are usually of a pale yellow color, firm to the touch, and slightly elevated above the general pericardial level. Microscopically, they consist of a centre, or core, of gummy, coarsely granular, caseous detritus, in which no muscle tissue is seen, and a peripheral zone of reaction composed of vast numbers of small round cells and much fibrous tissue in which run thick walled blood vessels with a peri-vascular ring of infiltrating cells. The muscle tissue in the area is entirely

necrosed, and outside the area shows varying degrees of degeneration atrophy, and replacement by fat and fibrous tissue. The three important features of this stage are necrosis of the heart muscle, small round cell infiltration, and fibrous tissue over-

growth. Lesions of this character in the myocardium can almost certainly be said to be the direct cause of death, although localized dilatations or general dilatation of one of the heart cavities is likely to cause death before this extreme stage is reached.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

TUBERCULOSIS IN THE AGED.

One often hears that tuberculosis seldom occurs after middle life and practically never after the age of sixty. In tabulating the frequency of any disease, at a given age, it is necessary to keep in mind the relative number of individuals living at that age. Realizing the proportion of persons living at the age of fifty and over, it is but natural to expect, that the number of cases of pulmonary tuberculosis occurring in the advanced ages should be correspondingly decreased. In the Tuberculosis Survey for the State of Maryland conducted about 1914 the incidence of the disease is found to be about the same for each decade after the second, that is, in proportion to the number of individuals living at the corresponding decades.

In caring for the aged it is always well to bear tuberculosis in mind. During the past two months two cases have come to my

attention. One a white man of sixty, who enjoyed robust health all his life until while at work he had a haemoptysis of several ounces. On physical examination the rt. apex was found impaired—expiration prolonged—with vesicular rales over the impaired area. The chest plate showed the characteristic picture. This patient refused to have his sputa examined on the advice of his other physicians who informed him that the disease was practically unknown at his age. The other case was that of a white woman of sixty five, who had had several attacks of pleurisy during the last two years, cough, loss of weight, strength and etc. Her picture showed, as did the physical examination, an involvement in both uppers with a small cavity in the rt. upper. It is the opinion of the editor that many cases of Pulmonary tuberculosis are over looked in the aged their disability being accounted for as "old age".

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

It is the purpose of this department to try to put before the reader practical suggestions for the reduction of maternal and infant morbidity and mortality, and to bring before the profession debated questions in the hope that free discussion will clear them up.

We have received a few questions recently and we are glad to have brought to our attention the problems that interest you. It is hoped that more questions will be brought up to form the basis for this department's material. Our answers will be founded on the best authorities available to us, our experience, and our judgment—where others differ with us, we trust they will make it known.

The only requirement for a question to be answered is that the name and address of the writer be signed: only initials will be published unless otherwise requested.

Questions: "Please discuss post-partum discharges, the cause and treatment of persistent discharge." J. J. S.

Answer:

1. Bloody.

A. Normal. The lochia or red discharge is expected on an average up to the 7th day; after this, lochia alba which may be normal for 4 weeks.

B. Abnormal. Occasionally one meets with bright red blood on the pads for weeks after delivery and the cause may be difficult to determine. In any case showing a highly colored lochia after ten days think of. (a) Subinvolution, characterized by an enlarged, boggy uterus, backache, and a sense of weight in the perineum. (b) Retroversion, especially if associated with lacerated perineum. (c) Retained secundines, usually associated with more or less fever and a foul odor to the discharge and a patu-

lous cervix. (b) Fibroid tumors. (e) Lacerated cervix. (f) Purperal Sepsis. A marked diminution in the lochia rubra before the 5th day is suggestive of infection.

2. White.

A. Normal. It is hard to define what is normal in the post-partum state, for patients vary in the amount of discharge and even more in the attention they pay to it. On the average, if a pad must be worn more than one month after delivery, it may be considered abnormal.

B. Abnormal. The same causes that give rise to a bloody discharge may be followed by persistent and troublesome leucorrhœa. Badly lacerated and infected cervixes are the commonest offenders.

Treatment.

A. Subinvolution. Mammary Extract, 5grs. every 4 hours, is sometimes magical. Pills containing Ergot grs. 1, Quinine grs. 1 1-2, and Digitalis grs. 1-4, four times a day, are helpful. A hot saline douche of the vagina is useful after the 5th day but must be aseptically given. (We never use an intra-uterine douche for fear of forcing fluid out through the tubes).

B. Retroversion. Requiring frequent change of position in bed for the first day, to lie on the abdomen for 20 minutes each day beginning the 3rd day, and knee-chest position for 12 long breaths each day after the 7th day to be continued one month, these are all prophylactic measures and should be routine. Tampons and pessaries if simpler methods fail.

C. Retained secundines. Examine the placenta and membranes carefully at delivery to determine if any has been left behind. "A piece of membrane the size of the hand or of placenta the size of the little finger nail may be left with impunity" is an

old saying. If the odor is foul or there is fever in connection with retention, the uterus should be gently emptied with the gloved finger and a sponge stick. Curettage is dangerous.

D. Cervical tears, unless the circular artery is involved, seldom give rise to pro-

longed bloody discharge. They do give rise to a troublesome leucorrhœa, sometimes, which may be helped by a cleansing astringent douche, for example of alum and zinc sulphate of each 1-2 teaspoon and boric acid one teaspoon to a quart of hot water.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

The Oxygen gas Generator described in the last issue of the Journal can be obtained from Eimer & Amen, 3rd Ave. & 18. St., N. Y. City, and from Powers & Anderson, Richmond. Price is quoted at \$25.00, and the extra "Oxone" (fused Sodium Peroxide) cartridges cost 55c each, and each will generate about eight gallons of Oxygen gas, of 95.5 per cent. purity.

As an emergency outfit several doctors could combine with a druggist to purchase and then make a charge of its use that would soon repay the outlay and keep a supply of cartridges on hand.

No criticisms of this department, nor any questions, have come to my hands as yet. Both would show interest on your part and encourage us to better effort in your behalf.

The Etiology and Treatment of Ammonia Dermatitis of the Gluteal Region of Infants, by J. V. Cooke, M. D. of St. Louis. J. A. M. A., Nov 1921.

We have heretofore believed that the intertrigo, chaffing, scalding, or whatever name you want to call it, was caused by acid, burning stools or, in the many cases of fat constipation accompanied by the ammoniacal diaper, by the ammonia, which resulted from chemical action of acid urine upon the alkaline soapy stool.

Dr. Cooke has found the true cause by isolating from the stools of infants with ammoniacal diapers, and of older children with enuresis and ammoniacal decomposi-

tion of the urine, a urea splitting bacterium for which he suggests the name *Bacillus Ammoniogenes*, which forms an intracellular ferment Urease, which depends upon the life of the bacillus for its activity.

Ammonia is produced from the urea of the urine in the diaper by the action of Urease in the presence of living *Bacillus Ammoniogenes* which infest the diapers from the stools.

The ammonia causes the dermatitis and, as the urease becomes inactive when its bacillus dies, the treatment consists in inhibiting the growth of the bacillus ammoniogenes.

This is accomplished by making a one to five-thousand solution of bichloride of mercury (one seven and one-half grain tablet to two quarts of water) and, after the diaper in this bichloride solution wrung out the night diapers are so treated but in severe cases, and where there is actual ulceration of the parts, all of the diapers are so treated.

The use of these medicated diapers checks the formation of ammonia and allows the intertrigo to rapidly heal, and in many cases the formation of ammonia doesn't recur, and in those that do recur the return to the medicated diaper promptly stops it.

In no case has there been any evidence of irritation being caused by the bichloride.

Give it a trial and report your results to us.

EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

SOME OCULAR SYMPTOMS THE RESULT OF PHYSICAL ABNORMALITIES IN THE NASAL CAVITY.

Ocular symptoms, the result of abnormalities in the nasal mucosa, have long been an established fact, entirely apart from the presence of pus producing organisms. Differences in the power of accommodation in the two eyes have frequently been relieved, as vouchsafed by such authorities as Balenger, Stucky, Pyncheon and others, by removal of the middle turbinal pressure against the septum in a partial excision of a hypertrophied middle turbinate, or the correction of a septal deformity. The disappearance of blepharospasm by the same procedure is a likewise generally recognized observation. Lacrimal disease from epiphora to blennorrhea may easily be associated with mechanical obstruction of the nasal end of the duct.

Blepharospasm, dacryocystitis, photophobia, ocular pain and reflex ocular disturbances, expressing itself in so-called asthenopia, have many times found a causative factor in nasal congestion, spurs, tumors, ulcerations, hypertrophied or polypoid-turbinal degeneration. Perhaps the simplest form of ocular discomfort which is apt to succeed a congestion of the nasal mucosa, with obstruction of the normal sinus outlets, is a unilateral headache, with pain and possibly some tenderness at the upper, inner angle of the orbit. This symptom would probably suggest a refractive defect, which, in itself may be a minor element in the causation of the condition. Frequently it is found that improvement in refractive defects, and the lessening of ciliary irritation and congestion, follow proper nasal treatment.

SOCIETY REPORTS

WILLIAMSBURG COUNTY MEDICAL SOCIETY

KINGSTREE, S. C.

April 11, 1922.

The Williamsburg County Medical Society met in special session, Thursday, April 6, 1922, with the following members present: Drs. W. G. Gamble, C. D. Jacobs, T. S. Hemingway, E. T. Kelly, T. C. Harper, and B. M. Montgomery.

The Society had as its guest on this session Dr. G. Fraser Wilson of Charleston, and Dr. H. L. Shaw and Dr. Milton Weinberg of Sumter, S. C.

The party assembled at the landing on

Black River, foot of West Main street, from whence they were motored by Mr. Leroy Epps in his launch, "Serena", to Brunson's Mill—a distance of two miles, and an ideal spot to indulge one's self in the sumptuousness of a Fish-Stew, such as was prepared and served by the renowned D. J. Epps. Those present for dinner follow: Drs. G. Fraser Wilson, H. L. Shaw, Milton Weinberg, W. G. Gamble, C. D. Jacobs, T. S. Hemingway, E. T. Kelley, T. C. Harper, and B. M. Montgomery; J. A. Cole and E. Leroy Epps.

In the afternoon at the Kelly Sanatorium, O. Lentz, dentists, and Messrs. D. J. and

Dr. G. Fraser Wilson, Professor of Obstetrics in the Medical College of South Carolina, and one of the leading Obstetricians of the South, delightfully entertained the Society with an interesting and instructive address. The subject of Dr. Wilson's discourse, "Shortening Labor,"—judging from the numerous questions asked, and the general discussions entered into, by those present—appealed markedly to his hearers.

B. M. MONTGOMERY, *Secretary*

FLORENCE COUNTY.

The Florence County Medical Society met in the parlors of the Hotel Florence at eight P. M., April 5, 1922. We were favored by an address by Dr. G. Fraser Wilson of Charleston, S. C. on "The Hemorrhages of Late Pregnancy." The meeting was largely attended, there being present a number of visiting physicians from the surrounding counties. The discussion was very liberal, and Dr. Wilson's remarks most practical and helpful.

M. R. MOBLEY, *Secretary*.

WILLIAMSBURG COUNTY.

Date of meeting March 9, 1922. President W. G. Gambel in chair. Roll call, number present 8; number on roll 12. Minutes read and approved. Dr. T. S. Hemingway read an interesting paper on Infant Stools which was discussed by the Society.

Dr. J. D. Jacobs reported two interesting clinical cases.

The Chair named a committee to draft resolutions which follow:

RESOLUTIONS OF RESPECT.

Whereas, on March 9, 1922, it pleased the Great Ruler of the universe in his all wise Providence to remove from the walks of life to that better Kingdom, our Brother Physician, Dr. W. V. Brockington:

Be it therefore resolved by the session of the Williamsburg County Medical Society:

First, that we have lost a faithful ex-member.

Second, that our heart-felt sympathy be extended to the bereaved family and they be assured that we share this loss with them.

Third, that these resolutions be spread upon the minutes of the session, a copy sent the family, also that a copy be sent the County Record.

T. Cuyler Harper

C. D. Jacobs

T. S. Hemingway

Committee.

B. M. Montgomery, *Secretary*.

OCONEE COUNTY

The Oconee County Medical Society met at Seneca March 14th, Dr. F. T. Simpson in the chair. The minutes were read and approved.

The following members were present: Drs. J. H. Johns, J. W. Bell, J. S. Stribling, W. C. Marett, E. A. Hines.

The program of this meeting was given over to the subject of Pediatrics. Dr. L. O. Mauldin of Greenville, Councilor of the Fourth District, read a most excellent paper on the subject of "The Contributions of the Eye, Ear, Nose and Throat Specialty to Pediatrics." Dr. S. G. Glover of Greenville read a paper on "The Care of the Baby", bringing out many practical points especially emphasizing the care of the new born. These papers were discussed by various members of the Society.

Dr. L. O. Mauldin, the Councilor, stated that it was his pleasure to report that the Oconee County Medical Society measured up in attendance, in membership, and in scientific work to the record of any other society in the Fourth District.

The election of officers was then entered into. Dr. W. C. Marett was elected President, Dr. W. A. Strickland, Vice President, Dr. E. A. Hines, Secretary and Treasurer, Dr. J. S. Stribling, delegate to the State Association, Dr. J. H. Johns, Alternate, Dr. E. C. Doyle whose time expired as the

two-year member of the Board of Censors, was re-elected.

A letter of thanks was read from Mrs. J. J. Thode and family for the floral designs sent by the Society at the time of the death of Dr. J. J. Thode.

The death of Dr. J. J. Thode, member of the Oconee County Medical Society, was reported and Dr. J. S. Stribling and Dr. J. W. Bell appointed a committee to draft suitable resolutions to his memory. This committee made the following report:

Since our last meeting we have lost one of our members, Dr. J. J. Thode of Walhalla. Dr. Thode had been practicing medicine about forty years, giving of his time and service without stint to those that needed him. He was a regular attendant on our Society. Therefore, Resolved:

1st. That the Oconee County Medical Society feels keenly the loss of such a loyal member.

2nd. That we sympathize with his family.

3rd. That a blank page of the minute book be dedicated to his memory.

4th. That a copy of these resolutions be sent to his family.

5th. That a copy be published in the Medical Journal.

(Signed) J. S. Stribling, M. D.

J. W. Bell, M. D.

The Society then adjourned to meet at the call of the President.

E. A. Hines, M. D.

Secretary Oconee County Medical Society.

DARLINGTON COUNTY

The quarterly meeting of the Darlington County Medical Society was held at Hotel McFall, in Darlington, on April 4, 1922, with ten members present.

In the absence of the President, the Vice President, Dr. A. D. Gregg, presided over the meeting.

The minutes of the last meeting were read and approved.

On motion of Dr. G. B. Edwards, Dr. J. J. Post, the County Health Officer, was

asked to be present at and participate in all meetings of the Society.

The chair then appointed the following committee to nominate officers for the year: Dr. Howle, Edwards and Carrigan.

The following were nominated and duly elected:

President, Dr. A. D. Gregg, Society Hill.

First Vice President, Dr. W. L. Byerly, Hartsville.

Second Vice President, Dr. O. A. Alexander, Darlington.

Secretary, Dr. Julian T. Coggeshall, Darlington.

Treasurer, Dr. J. W. Willcox, Darlington.

Censor, Dr. A. B. Hooten, Darlington.

Dr. William Egleston was elected as a delegate to the South Carolina Medical Association and Drs. J. W. Williamson and G. B. Edwards as alternates.

Dr. C. C. Hill reported an interesting case of ruptured uterus. He having delivered the woman of a dead foetus, attempted to deliver the placenta and found the uterus was ruptured. The placenta having passed into the abdominal cavity through the rupture was found behind the spleen by Dr. F. H. McLeod, who performed the abdominal operation.

Dr. J. J. Post was asked to prepare an article to be presented at the next meeting and Dr. J. W. Williamson will report on the meeting of the South Carolina Medical Association.

The meeting adjourned to meet again in July.

Julian T. Coggeshall, Secretary.

CHEROKEE COUNTY

The last meeting of the Cherokee County Medical Society, held in March, was a distinct success. Doctors Mauldin and Glover of Greenville were present and our attendance was nearly 100 per cent. I hope that we can work up a little enthusiasm among the doctors here, and I believe that we can

Roy P. Finney, Secretary.

ORANGEBURG COUNTY

The Orangeburg County Medical Society held its regular monthly meeting on April 11, 1922. Seventeen doctors were present. The following program was carried out:

Bacterial Vaccines as an Aid to Treatment of Infections; by Dr. G. H. Walters. Discussed by Drs. Paul Knotts, J. T. Green, and C. W. Morrison.

Hæmaturia, by Dr. B. G. Barrentine. Discussed by Drs. H. W. Cooper and H. T. Schiffley.

After the regular meeting, dinner was served at the Orangeburg Hotel.

Our next meeting will be May 8, 1922, at 4 p. m., in Orangeburg.

G. M. Truluck, Secretary.

ALLENDALE COUNTY

The Allendale County Medical Society met at Fairfax April 11, 1922. The meeting was called to order by the President, Dr. J. L. Folk. The minutes of the last meeting were then read and approved.

The names of Drs. S. R. Hickson and J. E. Warnock were presented for membership and both were duly elected. The society reorganized and the following officers were elected: President, Dr. J. E. Warnock, Allendale; Secretary-Treasurer, Dr. G. W. I. Loadholt, Fairfax. Dr. W. R. Tuten was elected delegate to the South Carolina Medical Association, and Dr. S. R. Hickson, alternate.

G. W. I. Loadholt, Secretary.

NEWBERRY COUNTY

Date of meeting April 14, 1922. President J. M. Kibler in chair. Roll call, number present 9; number on roll 20. Minutes read and approved.

Dr. W. E. Brackett of Whitmire, S. C., reported a case of aneurism of abdominal aorta. A man sixty-five years of age, fairly well nourished and developed, with rather pale and sallow appearance. Three months

previous he had influenza of three weeks duration. Physical examination: Few decayed teeth. Heart and lungs are normal. Blood pressure S 140, D 86. Temperature 97. Pulse 100. He complained of vomiting and severe epigastric pains and also very frequent and foul watery stools. Some tenderness over gall bladder. Nausea and vomiting with pain over gall bladder with slight fever persisted for five days. Wassermann was negative.

Probable diagnosis: Cholecystitis with possible cancer of gall bladder. Exploratory laparotomy showed no disease of the gall bladder but an aortic aneurism size of an orange in the epigastric region. Appendix was removed and abdomen closed. No pain or nausea or vomiting since operation and patient up and about.

John K. Wicker, M. D., Secretary.



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BOOK REVIEWS

THE SPLEEN AND SOME OF ITS DISEASES.

By Sir Berkley Moynihan, of Leeds, England. 129 pages with 13 full page diagrams. Philadelphia and London, W. B. Saunders Company, 1921. Cloth \$5.00 Net.

This Monograph enters a new field of medical literature hitherto vaguely touched upon by writers on medicine. It is comparatively within recent time that surgeons have undertaken to operate for diseases of the spleen. The author here goes into a full description of the disease, the etiology of which may be laid to a disturbance of functions of the spleen. Splenomegaly has been taught to be the chief manifestation of splenic disease. However, it is being recognized today that in the causation of disease and morbid processes there is a close interrelation between the various organs, and upset in the functions of any particular one having an important and decided bearing on the etiology of the disease. The book points out the close relationship between the spleen and the other organs involved in diseases. The diseases described that offset the spleen are pernicious anemia, leukemia, Hodgkins disease, splenic anemia, (Banti's disease) hemolytic jaundice, Gaucher's disease, Von Jacksch's Disease and polycythemia. The author concluded that the diseases of the spleen are not isolated entities but rather local manifestations of systemic disorders. There are full page original diagrams that clearly demonstrate the disease described. The author summarizes the present day knowledge of the disease of the spleen and has made a worthy contribution to medical literature.

THE ANATOMY OF THE NERVOUS SYSTEM

THE ANATOMY OF THE NERVOUS SYSTEM. From the standpoint of a development and function. By Stephen W. Ranson, M. D., Ph. D., Professor of Anatomy in Northwestern University School, Chicago. Illustrated. W. B. Saunders Company, Philadelphia, 1920. Cloth \$6.50 net.

This anatomy of the nervous system by Ranson is up to the minute. It is not the purely static, descriptive sort of presentation

that we have here but a more dynamic and functional one. The entire nervous system is covered in this book. Ranson is a reliable, careful writer. One is pleased by the brevity and clarity of the word pictures. Unnecessary description has been omitted. For a reliable, interesting book on the nervous system, giving its anatomy from the standpoint of development and function, one can find no better book than this one by Ranson.

THE ENDOCRINES. By Samuel Willis Bandler, M. D. Octavo of 486 pages. W. B. Saunders Company, Philadelphia and London. 1920. Cloth \$7.00.

No work in recent years will be received with more interest than Dr. Bandler's new publication on endocrines, for no subject has been more puzzling to the profession and with none have we struggled more earnestly for light. What is known of the endocrine glands is bearing more than sufficient root to form a working basis for the understanding of many of our hereditary, physical and psychoic questions. Only by therapy and the use of extracts of these glands can we be led to definite conclusions.

Every physician has in his hands the material with which he can lend aid in research along these lines, but he should understand the basic principles of endocrinology and Dr. Bandler's work furnishes these. There has been too much of a tendency on the part of many of the profession to depend on the manufacturing pharmacists for enlightenment on the subject. Literature issued by them has been notoriously unreliable and misleading, and Dr. Bandler's new work is issued at a time when there is a real demand for something authoritative on the subject.

Of special interest, in 22 chapters teeming with good things, are the chapters on internal secretions, the endocrines in gynecology, puberty, and the menopause, pregnancy and labor, mental and nervous defects, the autonomic nervous system and therapeutic suggestions concerning the endocrines. The work is unqualifiedly recommended to every physician.

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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EDITORIAL

SKETCH OF OUR PRESIDENT

The following sketch of President C. F. Williams has been copied from the recent volume "Who's Who in South Carolina," with certain minor changes:

Williams, Charles Frederick; born York County 1875; son of LeRoy Russell and Clementine Virginia (Wallace) Williams; educated in Banks High School; M. D. University of Maryland 1899; began practice in Yorkville and was there two years; entered U. S. Army as a surgeon after leaving Yorkville and saw service for three years, on duty at several posts in foreign countries; returned to South Carolina and began practice at Columbia in 1903; elected Secretary State Board of Health 1907; served as State Health Officer until 1911; resigned and took post graduate work in Europe in 1911; Superintendent S. C. State Hospital since 1915; member County, State,

Southern and American Medical Associations and American Psychiatric Association; Mason, member Rotary Club of Columbia. Married May Wilson, Manning, S. C., Dec. 8, 1903. Presbyterian.

OUR ANNIVERSARY COMMENDED

We appreciate very keenly the following editorial in the Columbia State, May 4th:

AN INTERESTING ANNIVERSARY IN 1923

In 1923 the South Carolina Medical Association will be 75 years old and at the recent meeting in Rock Hill it accepted the invitation to celebrate the anniversary by holding its annual meeting in the city of Charleston, the home of the South Carolina Medical College. In all these years the medical profession of South Carolina has been notably progressive. The physicians and surgeons have kept abreast with those

of other states. The Medical College is one of the two or three oldest in the country and from its earliest years young men graduated from it have become practitioners distinguished not only in this state but throughout the country.

A long time medical science in the city of Charleston was in advance of that in other South Carolina cities. Charleston indeed was the only community of considerable population and wealth in the state. Men of middle age remember when Columbia had no hospitals and when, outside of Charleston, was no hospital in South Carolina. In those days patients were carried to Charleston from other communities and accomplished specialists of Charleston often went to distant counties to perform operations. Now excellent hospitals are to be found in a number of cities and towns and the monopoly which Charleston enjoyed to a considerable extent, in having a body of physicians and surgeons of statewide reputation, has disappeared.

Nevertheless, the profession in Charleston has lost no ground. It lives up to its

old and noble traditions. It includes, perhaps, a score or more of men whose professional places are as well established as were those of their fathers. That Columbia, for example, having come to be an important city with hospitals, rivals Charleston in medical ability and skill subtracts nothing from the truth that the old position of Charleston is well maintained.

The meeting next year should and will be an event of extraordinary interest, historical as well as scientific. It will be the homecoming of many men who have gone out of South Carolina and from the South Carolina Medical College and have attained distinction in other states. The profession in Charleston will receive the visitors with the hospitality for which the old city is famous, and the convention is expected to give a renewed impetus to medical activities, including the great work of disease prevention, everywhere in the state. Columbia will have a particular pride and interest in the meeting by reason that the president of the association, Dr. Fred Williams, is one of its own most loved and prominent physicians.

ORIGINAL ARTICLES

SYMPTOMATOLOGY AND TREATMENT OF CERTAIN TYPES OF CHRONIC INFECTIOUS ARTHRITIS.*

By ERNEST S. CROSS, M. D., Baltimore.

It is said of the late Sir William Osler that on one occasion, when speaking to a group of medical students, he jokingly remarked, "When you see a case of chronic arthritis entering your office, make your escape by way of the back fence. You will get more credit." This is, of course, merely

a forceful and picturesque way of saying that the results of treatment in this group of cases are far from what we might desire and we have all, I am sure, had occasion to feel the force of this epigrammatic pleasantry. The difficulties of the situation, however, as well as the fact that a large number of patients with various manifestations of chronic arthritis look to us for some relief from this distressing condition, should urge us to renewed efforts to formulate treatment. In what I shall say today, it is not my purpose to present a comprehensive review of the subject as a whole but rather to emphasize certain points which have appealed to me as important in the observation of

*Address in Medicine before the South Carolina Medical Association, Rock Hill, S. C., April 9, 1922.

a group of arthritic patients in the clinic of Dr. L. F. Barker.

Arthritis means, of course, joint inflammation. The adjective "arthritic", however, is used often nowadays more loosely as a descriptive qualifier, applied to inflammatory conditions not in immediate proximity to joint cavities, such as inflamed bursae, muscles, etc., which should strictly be spoken of as bursitis, myositis, etc. However, this loose use of "arthritic" in the wide sense expresses our idea of the unity of the underlying causes of these various conditions.

The classification of the various types of arthritis offers more difficulties than does almost any other subject in medicine, and there are many reasons for the chaotic state of the terminology of this group of diseases. Unless very precise etiological factors are known, disease terminology is largely a matter of selecting more or less apt descriptive terms, and so in the past the subject of arthritis has been approached from different angles by various investigators, some of whom describe the joints and other changes in terms of pathological anatomy, others in terms of bacteriological findings, others in X-ray terms, still others in symptomatic or so-called clinical terms. These names have originated in various countries, have been more or less influenced by the varying theories of the causation of the disease processes, and the types have naturally overlapped somewhat. Owing to the confusion of names some have felt that there must be certain types of joint diseases peculiar to certain localities and countries, but a pretty careful survey of the situation by investigators familiar with the reasons for the diversity of nomenclature makes it quite certain that there is a very definite uniformity in diseased joint manifestations in all countries.

For our present purposes it is useful to remember that the group of (1) acute arthritides includes (a) acute articular rheumatism, (b) pyemic joint infection, (c) gonorrheal arthritis, and (d) cases of ar-

thritis in one or many joints, complicating certain acute infectious diseases such as some of the exanthemata, pneumonia, typhoid fever, mumps, syphilis, etc.; (2) chronic arthritis includes (a) gout, (b) chronic infectious arthritis of specific origin such as tuberculosis, gonorrhea and lues, (c) chronic infectious arthritis due to invasion of the body by bacteria other than tuberculosis, gonorrhea and lues. This form corresponds to the older term, arthritis deformans, and presents certain main types of pathological changes, namely (1) synovial and periarticular types, (2) atrophic types, (3) hypertrophic types. These three types of lesions are more or less interchangeable and are frequently all three observable in a single case. In general, however, it may be said that the spine is more apt to show the hypertrophic changes while the atrophic and synovial and periarticular lesions occur more often in the joints of the extremities. These various types of lesions are not easily recognized without the help of X-ray plates, but their exact determination is of considerable value in prognosis, in explanation of unusual types of pain, and in suggesting the nature of treatment particularly along orthopedic lines.

In this paper I propose to consider only that group of chronic infectious arthritides which is believed to be due to the action of bacteria other than tuberculosis, gonorrhea, lues, etc., and which more nearly conforms to the older term, arthritis deformans. It might be better to supersede this name since it has come to suggest a worse prognosis than is justified in many instances and moreover, from the point of view of diagnosis one must place in this class many relatively slight and practically non-progressive lesions to which the term arthritis deformans scarcely applies.

These chronic infectious arthritis cases come to us with accounts of symptoms which have been present from one to twenty or more years. Pain, stiffness, and alterations in the neighborhood of various joints are

the usual presenting symptoms. Some patients give a history of recurring subacute attacks of fever accompanied by pain and swelling in certain joints with only a little discomfort in the interim, yet with persistent and progressive deformity in the joints. Others relate stories of a gradual, insidious involvement of joint after joint accompanied by more or less constant stiffness and pain. Such outspoken symptoms, of course, put us at once on the track of the true condition.

I should like to emphasize, however, the importance of suspecting and carefully searching for evidence of chronic arthritis in cases complaining of sciatica, lumbago, neuritis in the arms and legs, recurring stiff neck, and certain types of obscure pain. I do not mean to be understood as saying that an inflammatory condition always underlies sciatica, lumbago and neuritis, but in certain instances this is the case. The majority of cases of subdeltoid bursitis will be found on careful examination to present evidences of arthritic changes in the neighborhood of certain joints. In sciatica and lumbago, particularly, mechanical and static factors are also of great importance, but there are many cases in which the element of infection is even more important.

In connection with the subject of the cause of certain peculiar pains, a recent case occurs to me in which the chief complaint was of pain in the right back below the scapula, radiating to the front of the chest. Orthopedic examination, confirmed by X-ray studies, revealed a marked arthritis of the spine which in certain areas had progressed to the formation of huge exostoses on some of the vertebral bodies. The complete study of this patient pointed to the arthritis as the real cause of the pain.

Many of these arthritic patients are markedly undernourished, sometimes as a result of infection, pain and loss of sleep, but sometimes too from ill-advised and insufficient diet. In other instances there is a tendency to overweight, and the importance of this factor on weight-bearing joints

should be fully recognized. A very common finding, especially in the more marked cases, is absence of free hydrochloric acid in the stomach juice or perhaps only a marked subacidity. Secondary anaemia is another of the common findings.

Let us turn, now, to a brief consideration of the way in which we are to look upon these arthritic processes, some exceedingly serious and self evident, others slight and relatively non-progressive, and still others the unseen underlying causes of various annoying or serious manifestations.

In discussing the nature of arthritis deformans as late as 1892, Osler said, "The multiple form has in all probability a nervous origin." "The true nature of the disease is still obscure, but the neurotrophic theory meets very many of the facts." At the same time, in discussing acute articular rheumatism he mentioned among the theories of causation the possibility that the condition might be due to microbic infection. In 1898 we see a definite change in viewpoint, for the edition of Osler's text-book of this year emphasizes the importance of looking upon rheumatic fever as the result of invasion of the body by microorganisms and relegates to a subordinate place the older theories of metabolic and primary nervous disturbances as causative agents. In this same volume one finds discussed the theory that arthritis deformans may be really a chronic infection, but the author says, "At present, I think the evidence is quite as much in favor of the older neurotic view."

Gradually since then, investigators have presented facts which make us look upon all acute arthritis as infectious (except of course those cases due to trauma) and to regard in the same way almost all chronic arthritis except gout. I say almost all chronic arthritis because certain authorities speak of a group of cases which they call hypertrophic arthritis, occurring in middle and more advanced life, characterized chiefly by marked overgrowth of the affected bony parts and regarded as due not so much to infection as to metabolic changes. We must re-

cognize that X-ray plates show in the majority of individuals of middle life and older the presence of bony changes about the joints including more or less pronounced exostoses and yet no clinical evidence of arthritis. These may well represent the reaction of the tissues of the joint system to the various, more or less transient infections which no human being escapes. There is no sharp line of demarcation between these senile or presenile changes and actual arthritic changes and this fact should be always in mind in reading X-ray plates of bones and joints. The reactions of individual tissues vary in their manifestations for reasons which we do not yet understand. We sometimes beg the question by speaking of the inherent qualities of the tissues and we know, of course, that bacteria and their toxins are variable quantities. One cannot help speculating sometimes as to whether the lesions of the hypertrophic form of arthritis are instances of pronounced tissue reaction. There is much interesting work being done in connection with metabolism in chronic arthritis; but we have not yet reached the point where it is safe to deny the possibility of an infectious element in all cases of chronic arthritis except gout. Metabolic studies may well throw light on some of the reasons at least for the excessive bony overgrowth in the hypertrophic form.

For practical purposes then chronic arthritis, except gout, is to be looked upon as of infectious origin and directly connected with some area of infection either past or present in the body. Bacteria escape from the original focus of infection into the blood stream. If, because of proper conditions they settle down in certain of the joints, arthritis is determined and in many instances bacteria have been recovered from joint cavities. It may be that bacterial toxins circulating in the blood, without the actual presence of bacteria themselves, are a cause of arthritis. Hence the great importance of the so-called focal infection theory since any collection of bacteria anywhere in the

body may be a potential source of bacteria or toxins to produce joint inflammation or to add new impetus to an already existing process.

The most important factor in our conception of the disease processes of chronic arthritis is, therefore, bacterial infection, but there are certain other important factors such as the mechanical and static elements, trophic and nutritive changes that must be taken into account especially in formulating adequate therapy. We may conceive that the strain on weak tarsal arches or on any weight bearing joint in a very heavy individual may, by lowering local resistance determine the site of growth of a few bacteria escaping into the blood stream from teeth abscesses, sinus infections or what not. The fact that many cases of chronic infectious arthritis reveal no focus of infection outside of the joints is not surprising or to be interpreted as militating against the theory of focal infection but we are to look upon the original foci as having healed leaving only indefinite traces of their existence while the metastatic areas about the joints still retain some virulence. Then, too, there are parts of the body to which we have very little access where hidden foci can easily defy the most thorough search. The actual joint inflammation is greatly complicated by the presence of nutritive and trophic changes, muscular atrophies, adhesions, serous membrane alterations, cartilage destruction, bony exostoses, etc. I emphasize these changes because the therapist who stops discouraged on finding no focus of infection to remove surgically is very far from doing what he should for his patient. It is true that many chronic joint inflammations cease activity spontaneously after a time, like self limited diseases, hence we cannot overestimate the importance of preserving in so far as possible the function of joints and limiting anatomical changes. One frequently notes great disparity between the amount of pain and the degree of anatomical change, particularly as shown in radiographs. Exceedingly angry looking and painful joints

may show practically no bone change because the soft parts of the joint structures are the first and real victims of the inflammation while the bony involvement is a late stage. Much later, where there is marked bony change, the process is often more or less burned out and the pain may be not that of active disease but rather the result of bony pressure, ankylosis, or spur formation, or there may be no complaint of pain whatever. Frequently in the examination of gastrointestinal X-ray plates we see huge spurs and even clasp formations between lumbar vertebrae which are causing no inconvenience. The patient may be greatly surprised to learn that he has such conditions which are certainly evidences of chronic arthritis and which may sometimes lead to the real interpretation of an obscure condition.

It is plain, therefore, that investigation of a case of chronic arthritis must involve among other things the most exhaustive search for areas of infection in all parts of the body. The status of the intestines as a source of infection and toxemia is I think as yet unsettled except of course where there is a chronic appendix or an infected diverticulum. We need more facts in connection with the effects of the intestinal contents, particularly in stasis, but it would seem now that stasis in the small intestine is of more importance than colonic stasis as far as toxemia is concerned.

Let us turn now to the question of treatment in these cases of chronic infectious arthritis.

1. The first step is naturally the removal of foci of infection. There are of course many possible areas in which to find such foci but they are most apt to be found about the teeth, the tonsils, paranasal sinuses, lungs and bronchi, gall-bladder, diseased appendices or intestinal diverticula, urogenital system including particularly the uterus and adnexa in women and the prostate or seminal vesicles in men. Local inflammations of the skin or about the nails are also sometimes important.

In connection with the teeth it must be noted that pyorrhea and even isolated pockets of pus about the gums are no less important to treat than large periapical abscesses.

The management of discovered foci of infection calls for much judgment and sharp distinction must be made between certain or probable infections and merely a suspicion of infection. While it is safer to be radical in cases of chronic arthritis we cannot indiscriminately advise laparotomies to remove symptomless appendices merely because we believe them to have been the seat of an infection at some time. Neither should we remove devitalized teeth showing no X-ray or clinical evidence of abscess formation but should look upon them as likely to become infected and so subject them to occasional observation. Where certain or probable infection exists the patient must be fully informed and advised to submit to proper surgical intervention where this is applicable. At the beginning of our investigations into non-surgical biliary drainage it was hoped that certain cases of infected gall-bladders could be cleared up without recourse to surgery, thus avoiding the more or less likely postoperative annoyances and difficulties, but we do not know yet how efficacious this method may prove. Prostatic infection is often amenable to treatment by skilful massage of the gland. At the present time careful removal of the tonsils undoubtedly offers the best method of eliminating infectious processes in these structures but in a few of our cases, especially where surgery was contraindicated radium has been tried. Here too we are not yet in position to estimate the value of radium or X-ray therapy.

2 Next in order of importance comes general upbuilding of all the bodily functions. The resistance of the body itself to bacteria is our best weapon and everything must be done to strengthen this weapon.

(a). Complete rest of body and mind is usually indicated at least for a time. Some patients fear stiffening of the joints if they

remain in bed but they should be reassured as to that and means taken to prevent such a catastrophe. Pleasant occupation and diversion are essential and are to be adapted to the capabilities and tastes of the patient. Abundant fresh air and sunshine are indispensable but are not to be obtained at the expense of exposure and chilling of the patient.

(b) The diet must be adapted to the individual. The thin, ill nourished patient should receive a very liberal quantity of food of every variety including meat, vegetables, fruit, starchy foods and sweets and fats. Improvement may be expedited by prescribing milk and raw eggs to be taken immediately after each meal. The obese individual is placed upon a diet poorer in starches, sweets and fats until the weight approaches more nearly to the normal. A careful reckoning in calories of the daily intake allows one to make more satisfactory progress. Some patients complain that certain acid foods increase their joint discomforts in which case omission of grapefruit, lemon and perhaps tomatoes is allowable but how much of this pain is real and how much is the result of an old established belief that acids are harmful in rheumatism I do not know.

(c) Secondary anaemia is frequently present and should be carefully treated by appropriate therapy including arsenic and iron though how often do we wonder whether rest, abundant food and fresh air are not more potent than even Bland's pills and cacodylate of soda. If the stomach juice is found to contain little or no free hydrochloric acid this deficiency should be supplied by the administration of ten or fifteen minims of the dilute hydrochloric acid in a little water after each meal.

(d) On general principles the intestinal functions should be regulated. Frequently the combination of liberal diet, abundant liquids and regular habits, with a little mineral oil night and morning relieves what has been regarded as a stubborn constipation. We need to know more about the sub-

ject of absorption of toxins both bacterial and chemical from the intestinal contents but for the present it seems to me wiser to secure regular adequate bowel movements without recourse to enemata except on rare occasions.

(e) Drugs for the control of pain are necessary in many instances. That household remedy acetylsalicylic acid has, in my experience, been the drug most likely to be helpful. Some cases do well on some of the atophan group like cincophen, tolysin, etc. Occasionally a little pyramidon may be added to the aspirin. Improvement in the general condition cannot be rapid in the presence of much pain so we should pay particular attention to this symptom.

3. The treatment of the joints themselves is a matter meriting the most careful consideration and has for its chief ends the relief of pain, the lessening of joint inflammation and the preservation of as much joint function as is possible. The advice and help of an expert orthopedist is most desirable but even where this constant supervision is not feasible much can be done in simple ways.

(a) The application of external heat to the joints seems to relieve pain temporarily and to increase the blood supply to the affected parts, a result which is much the same as is obtained in the so-called Bier treatment. We may use hot compresses, covered with dry wrappings and oiled silk. These should be applied two or three times a day for twenty minutes or so, changing the compresses when cool. Electric pads, hot water bags and other forms of heat are helpful. Where large joints are involved prolonged soaking in a very hot tub once a day is useful but care must be taken not to over-weary the patient. Best results of course are apt to come from the use of a regular baking apparatus which can be adjusted to fit various parts of the body, and which insures a greater and more continuous degree of heat. Baking should not be applied for too long a time at any one sitting since it may be somewhat exhausting. A half-hour's

treatment once daily is usually sufficient. Sometimes three or four treatments a week are all the patient can stand.

(b) Massage affords much help. Patients with chronic arthritis should have some general massage to improve the general muscular condition. Local massage to affected joints improves nutrition and helps to prevent atrophy and adhesion formation. It should be carefully given with the purpose of avoiding pain as a rule, and in acute or even some subacute cases, massage is contraindicated. Occasionally where adhesions are serious, we cannot avoid some painful treatments.

(c) Active and passive movements are of service much in the way massage is useful and we are all familiar with joint cases in whom activity has ceased and who owe their fair degree of function to determination on their part to keep their joints movable. Here again, it may require expert knowledge to determine whether a certain joint shall be protected for a time or subjected to exercises. In the matter of exercises, as well as in massage, one must be on the watch to avoid doing harm.

(d) Artificial appliances when skilfully made and properly fitted are important helps. Care should be used to keep them as light as is consistent with strength. At certain stages, some joints need support, for instance a painful sacroiliac joint may be held tightly by a properly fitted belt-like support, thus affording rest and giving the inflamed area a better opportunity to heal. Corset-like appliances may give great relief to a painful lumbar spine. If for instance, one knee is severely affected and the other one almost symptomless an arrangement of leather and steel may practically transfer much of the weight to other parts of the lower extremity. Painful feet may be supported by plates and if required, special arrangements may be made to keep the weight off spurs and other exostoses. At times, immobilization may be necessary but we should always be on the lookout for the formation of adhesions and fixations. Oc-

asionally one encounters a large joint which is not ankylosed but is partly fixed by adhesions and muscular contraction at an awkward angle. A proper, adjustable traction apparatus may gradually draw such a joint into a better position which will contribute greatly to the patient's comfort and ability to use the limb, if not the joint. All these measures are, of course, best carried out under the direct supervision of the orthopedist.

(e) Operative measures on joints themselves are at times indicated. Manipulation to free adhesions in joints which are afterward kept mobile may be desirable. In extreme cases of fixation of joints, in awkward or difficult positions, arthrectomy may be justified. Removal of loose bodies and of villous masses within the joints, as well as spurs projecting into the soft parts may give great relief.

4. Vaccine therapy has not attained much success in the treatment of chronic arthritis and at best, this field is restricted, the reasons for which are not hard to see. Rational vaccine therapy demands an auto-genous vaccine requiring cultures of the bacteria involved in the inflammatory process, that is from the focus of infection. The more direct therapeutic way is, of course, to eradicate the focus. When however, this is impossible to accomplish or the process proves refractory to treatment, vaccines would seem to find a promising field. We must believe the bacteria concerned in chronic infectious arthritis to be so variable in species, type and virulence as to make the selection of stock vaccines a very difficult matter; and in the absence of any indication of the actual bacteria involved a hopeless task. Beneficial results are reported in some cases from the administration of vaccine made from the bacteria present in enlarged lymph glands. This procedure calls for excision of one or more glands preferably such as have shown some increase in size at some time, not too remote from the development of joint symptoms. With the administration of foreign proteins such

as proteose or in the form of typhoid vaccine, I have had no experience but McCrae emphasizes the necessity of sharp reactions if any benefit is to be derived. The possibility of the appearance of severe anaphylactic reactions is likely to be a bar to any widespread use of this form of treatment.

5. Drug therapy, since we have no specific, must be symptomatic but as S. W. Lambert has recently indicated drugs have a considerable value as secondary measures. How far we shall follow those who attempt to sterilize or alter the flora of the intestinal canal depends upon our individual conception of the necessity or even the possibility of such an accomplishment. As previously suggested, we must bend our energies actively to the relief of pain but except in occasional cases, the administration of opium preparations is not justified. Certainly in the majority of instances as much temporary relief as one can expect is obtainable by selecting one or more of such remedies as the salicylates, pyramidon, antipyrin, acetphenetidin, etc. The atophan derivatives are occasionally useful even where there is no apparent element of gout. Potassium iodide was formerly much more in vogue than now and nothing definite can be said about its action. If it is used, care should be taken not to upset the digestion or spur into activity a latent hyperthyroidism. The general nervous system may be much soothed by the use of bromides or adalin and it may be quite worth while to try some of the milder hypnotics, like veronal or dial to promote sleep since arthritics are apt to wake often partly because of the uncomfortable position in which many must lie and the transient discomfort resulting from unconsciously turning or moving in bed.

6. The psychic management of these cases is a subject to which I fear little attention has been paid. Too often, some enthusiast in his desire to benefit has appeared to promise complete relief as sure to follow

some special form of therapy, such as the removal of a single focus of infection. The patient's hopes may be thus raised several times only to be destroyed. Many forms of treatment including visits to spas and hot springs are said to have been only temporarily helpful and the patient is irritated and depressed. Is it not better to take the time to make clear the nature of the arthritic problem, to explain why focal infections should be removed even though no direct result may be immediately visible and to indicate that local treatment to be effectual must, in some form, be maintained over a long period? When the patient is disheartened over the too common failure to find any definite focal infection, it will be helpful to remind him that often the original focus dies out and that frequently in the course of time, the same thing happens to the joint activity itself. Such patients are always on the watch for some new measure or remedy and catch eagerly at any straw. We should always be ready to discuss such matters sympathetically, advising against measures which we feel can lead only to disappointment and yet ready to accept every rational, helpful suggestion.

Summary: In all cases of chronic arthritis except gout, we must search for sources of infection within the body and try to remove them. The influence of possible metabolic errors is not yet worked out or proved.

Our failure to find foci in some cases does not prove their absence and in certain instances, we may conceive of the joints themselves as having become the seats of metastatic areas of infection. While removal of infectious foci is the first step in treatment, it is equally important to increase the general resistance of the patient to infection; to promote healing of the joint tissues and to maintain every possible degree of joint function.

1035 North Calvert Street.

PERIRENAL ABSCESS WITH CASE REPORTS

By DR. J. H. TAYLOR, Columbia, S. C.

From the purely operative point of view perirenal abscess holds little of interest for us, other than the light the operation may shed on other aspects of the condition. On the other hand, the obscurity of its etiology, the real nature of its pathology and the difficulty of its diagnosis in certain cases lends it a really great degree of interest.

Perirenal or Perinephritic abscesses have been considered as primary when they originate primarily in the perinephritic tissues and secondary when the suppuration is a continuation of disease from an adjacent organ or structure, whether the kidney or some other focus.

Braasch (S. G. O. Vol. 21-1915 P. 631) goes so far as to say that its exact pathology is still undetermined and the question as to whether a perirenal abscess may originate in the perirenal tissues without any primary involvement remains unanswered. He makes the distinction between an abscess of renal origin and one arising in other tissues. The former group he terms true perirenal abscesses, the latter, retroperitoneal or subdiaphragmatic.

In any given case the probable source is often times obscured by the long duration of the disease, the frequent inadvisability of exposing the kidney, the difficulty of determining the focal point in a large abscess cavity and the indefiniteness of clinical symptoms in renal disease limited to the cortex.

In the primary cases the infection may gain access to the perinephritic tissues by three routes:

1. The lymphatics.
2. The blood stream.
3. Through overlooked renal lesions.

Furthermore, trauma may produce a superficial laceration of the kidney tissue with hemorrhage into the perirenal tissues or

reduce the resistance of these tissues to such an extent that the bacteria may find lodgment here and produce an abscess. This renal laceration may be so small as to escape observation or may heal over before the development of the inflammatory condition in the extra-renal tissues.

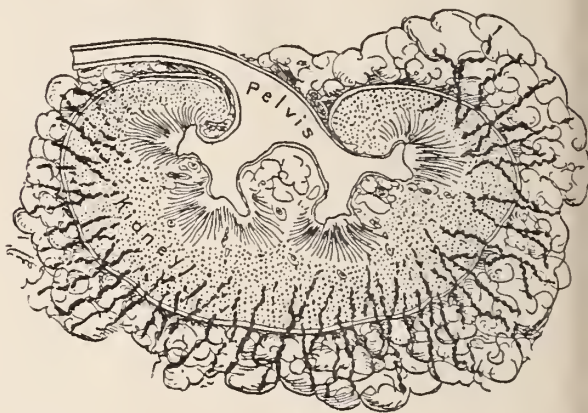


Plate No. 1.

Relation of lymphatics of cortex of kidney to those of perinephritic fat. These penetrate the true capsule and permit of infection being carried from the kidney proper to perinephritic tissues.

The extension through the lymphatics connecting the urinary system with other structures is undoubtedly quite frequent, thus there is a direct connection through the lymphatics penetrating the capsule between the cortex of the kidney and the perirenal tissues (See Plate 1) There is a direct inter-communication between the lymphatics of the kidney, ureter and bladder. (See Plate 2) From above the lymphatics pass through the diaphragm to communicate with those of the perirenal tissues. As quoted by Richardson (S. G. O. Vol. 21, 1915), Sweet & Sweet and Stuart have shown the great importance of ureteral lymphatics in ascending infections of the kidneys and perinephritic tissues.

Organisms are always circulating free in the blood stream and may gain access to the perirenal tissues through the blood vessels going to the part or they may locate under the capsule in the kidney cortex and by direct extension or by breaking through the capsule infect the perirenal tissues. (See Plate 3) The staphylococcus is the usual in-

*The plates appearing in this article are reproduced by permission of the author from an article entitled "Infections of the Kidney," by Dr. Daniel N. Eisendrath of Chicago, Ill.

This article appeared in Surgical Clinics of Chicago, October, 1920.

fecting organism in the cortical abscesses and have their origin most frequently in carbuncles, furuncles and paronychia through the blood stream. Braasch claims that these cortical abscesses are the cause of all the unidentified perirenal abscesses that show negative urinary findings. The above then are the possible causes of infection in the primary cases.

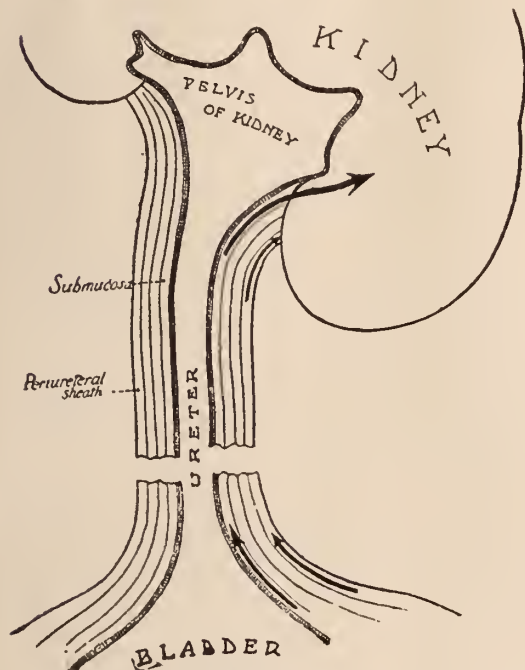


Plate No. 2.

Diagrammatic representation of mode of spread of infection along submucous and periureteral coat of ureter from bladder to kidney.

In the group of secondary abscesses the result of a direct and demonstrable spread of the infection we have first and foremost the kidney itself. Here the extension may be from a pyonephrosis, renal tuberculosis, cortical abscesses, (See Plate 3) and traumatic rupture, other sources may be extension from an appendix abscess, an empyema, a Potts abscess, etc.

However, it is not so much the pathology of the condition however fascinating and often times obscure, but how to recognize it when encountered that is of prime interest to the medical man. For after all is said and done, early diagnosis is the game.

The onset of perirenal inflammation is frequently very vague and insidious and extremely difficult of interpretation where there are no renal findings. A dull ache in the flank or an uneasy feeling may be the first indication. This may occur only at times for a number of days, but gradually becomes more persistent and more pronounced, later we may have a chill with a rising temperature and if undiagnosed and untreated there develops finally a mass in the flank with rigid muscles or perhaps bulging in the ilio-costal space. It may take weeks for these visible evidences of an abscess to develop. On the other hand, occasionally a case is ushered in with a sudden acute pain simulating renal colic or perhaps an initial chill with the localizing symptoms developing later. As in one of our cases reported below distinct remissions may occur during which periods the patient may be entirely comfortable and free of fever for days. In all cases, however, there appears later the typical symptoms of fever leucocytosis and the other evidences of infection.

Hence, it must be borne in mind that this condition of perirenal inflammation may be distinctly baffling, especially as we have said in those cases where the urinary findings are negative and the X-ray gives no help.

In those cases of renal origin, however, there are unusually present in the urine pus cells, albumen and perhaps red blood cells and casts.

The cortical abscess developing just under the capsule or the abscess between the capsule and the cortex are those in which we are least apt to find the tell-tale findings in the urine. So important indeed are the urinary findings that every modern development in urinary diagnosis should be brought to bear in determining the true focus of trouble. (Braasch S. G. O. Vol. 21, 1915 P. 631)

1. Repeated urinalyses on frequent occasions. A single urinalysis is of little value it is claimed.
2. A bacterologic investigation of the

urine from both kidneys gotten through a catheter.

3. Estimation of the comparative renal function.

4. A thorough X-ray examination including the urinary tract, the thorax and pyelography.

The surgeon usually gets the case after it is distinctly chronic with a mass in the flank, perhaps bulging in the ilio-costal space and the patient drawn well over to the affected side and markedly septic. These abscesses may follow certain fascial planes and be found pointing under Poupart's ligament, as in Case 3 about the anus as an ischio-rectal abscess or may break through just above the crest of the ilium or through the diaphragm into the pleural cavity.

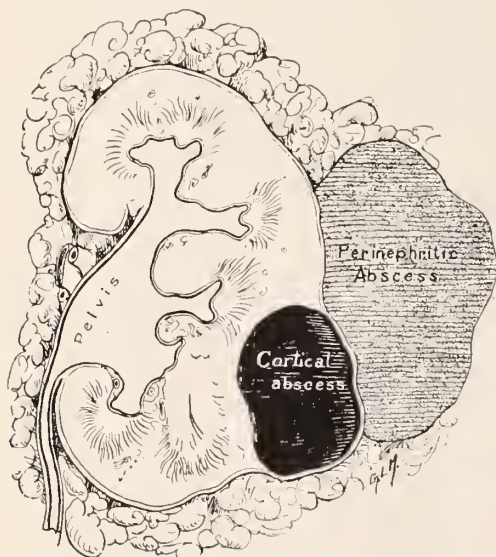


Plate No. 3

The cortical abscess was the primary lesion and by direct extension or rupture through the capsule the perinephritic abscess was developed.

In the following cases reported we did not feel justified in exposing the kidney sufficiently to determine definitely whether the abscesses had followed a primary cortical abscess of the kidney or whether the infection had taken place through the other channels as indicated in the above text. From a therapeutic standpoint our judgment was justified in that the cases all made un-

eventful recoveries, except the aged patient reported. (Case 3)

CASE 1.

This case illustrates well the very slow onset and development that may at times characterize a perinephritic abscess. B. R. S. a white railway fireman was admitted to the Baptist Hospital October 15, 1919, 30 years of age. In the spring of 1918 he had an ischio-rectal abscess that spontaneously ruptured and healed without further trouble. Somewhere about August 1, 1919 he noted an occasional ache in the left flank while firing his engine. This pain would appear only when the firing was heavy, and later he would find himself very sore in this flank after the end of a heavy run. After the lapse of a few hours this soreness would disappear leaving him feeling well again. About the end of August the soreness and tenderness in the flank became constant, remaining so through September. During these two months he had no chilly feelings nor was he conscious of having fever. October 1st the pain was so severe and he had become so weak he took to the bed. Shortly thereafter chills followed by fever and sweating appeared, noticeable especially at night. The pain in the flank now became severe and constant, extending up and down his back and also into the left hip. About two weeks after taking to his bed urination became frequent, three or four times morning and evening, without pain or difficulty. He never noticed anything suggestive of blood in the urine. Two or three days before going to the hospital there appeared a painful swelling near the anus. He was admitted to the hospital at 4 P. M. October 15th.

T 99.8 P. 78 R. 28.

Oct. 16. T. 99. P. 78. R. 20.

Oct. 17. T. 100 P. 102 R. 24.

He was a large man and obviously septic. Pointing to the left of the anus was an ischio-rectal abscess. Occupying the left ilio-costal space was a definite mass with marked tenderness and muscle rigidity in this area.

Cystoscopic examination by Dr. M. H. Wyman, October 16th, Bladder urine acid, faint trace of albumen, no sugar, a few pus cells and a few red blood cells.

Bladder, normal; right kidney, normal in function and urine negative; left kidney, an occasional pus cell, function normal.

Radiographs of urinary track negative for stone.

Diagnosis: Urinary track not involved, probably perinephritic abscess. On October 18th operation revealed a large collection of pus in the perirenal tissues below and posterior to the kidney. The kidney was not exposed. There was no direct connection demonstrated between the perirenal and the ischio-rectal abscesses as was suspected before operation.

Cultures of pus from the perirenal abscess showed pure culture of staphylococci.

We believe in this case there was a small cortical abscess as indicated by the urinary findings, and from this abscess there was direct extension by rupture or passage through the capsule to the perirenal tissues of the infecting organisms.

October 27th he was discharged from the hospital having had a normal and rapid convalescence.

CASE 2.

A. G. First seen January 29, 1920. White, 13 years of age, entered the Baptist Hospital January 31, 1920. Family history negative. Personal history, no previous illness of note. Present illness: About the 7th of November, 1920, while playing bumping shoulders with other boys, he was knocked down violently striking his right side. On the 8th he felt tired coming from school and claimed that it was with difficulty he carried his books. This feeling of malaise continued for several days when pain appeared in his right side as a dull ache. Later the same week he exerted himself rather violently in cranking a Ford truck. On November 13th he had a chill about 10 A. M. but went to the movies in the afternoon and during the show felt quite cold again. During the day he ran his automobile but his side con-

tinued to hurt. That evening he chopped wood. His temperature was taken that evening by his mother who thinks he had none, tho she doesn't remember distinctly. November 14th his temperature was normal in the morning and apparently he was well with the exception of the pain which kept him drawn over to the right side a little. About 3 P. M. his temperature was found to be 103 1-2. For the following week his fever ranged from 100 to 102 daily. His physician thought at first it was an infected gall bladder and later felt it was more probably the appendix, though the whole right side of his abdomen through to the back was sore and tender. The week beginning November 21st his temperature was much

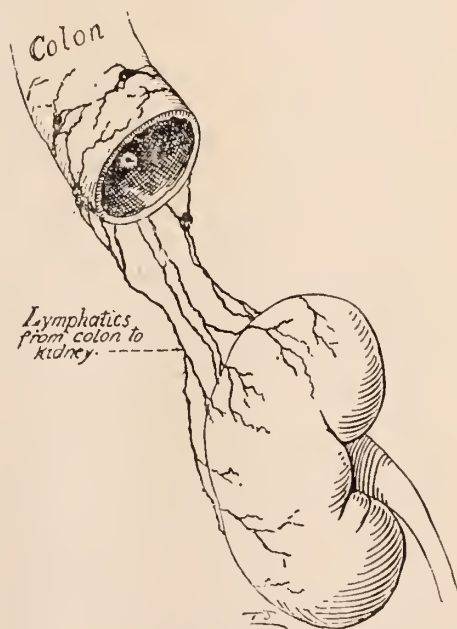


Plate No. 4.

Diagrammatic representation of lymphatic communication of colon and kidney.

lower and about its middle he was allowed to sit up in an armchair, after two days without fever. That afternoon his temperature rose again and continuing. A widal was done on his blood and found to be positive. November 29th. (Typhoid vaccination, two years previous). From now on he had intermittant fever, sometimes going several

days without temperature, though the pain continued in his right side. On December 20th he was allowed to sit up in an arm-chair. On December 24th his temperature reappeared and got up to 101. On the 26th he felt worse than at any time during his illness. Temperature 102, no appetite, pain in side worse. He remained in bed for ten days his temperature gradually subsiding. The urine examination at this time resulted in a diagnosis of pyelitis complicating an appendix being made. He now ran a constant temperature from 100 to 101. On January 29th I saw him in consultation. Physical examination: We found a pale, anaemic septic boy. In walking he held himself bent far to the right. Abdomen was soft, no bulging in right flank. On bimanual examination there was a mass to be felt in the right flank with the posterior muscles rigid. A diagnosis of pus within or round the kidney was made. On entering the hospital January 31st, 11:30 A. M., T. 97, P. 90, R. 24. At 10:30 P. M., T. 101, P. 110, R. 20. From this date on to his operation, February 4th, his temperature never got above normal, nor his pulse above 100. Leucocytes 13,000, differential count, polynuclears 81, lymphocytes, 18, eosinophiles 1st. Urological examination by Dr. N. B. Edgerton, Feb. 1st. Bladder, negative. Left ureter not catheterized, right ureter no obstruction, 25 cm, No. 6 catheter. Urine from right kidney showed occasional pus cells and a few granular casts. Pyelogram right kidney normal. Thalein output normal. No infection in right kidney. Voided specimen January 31st was acid, no albumen, no sugar, microscopical examination negative. On operation a collection of thick yellow pus, about four ounces in quantity, was found posterior to and below the kidney. The kidney was not exposed.

This case illustrates again the slow and insidious onset that may characterize a perinephritic abscess and the difficulties of diagnosis in its early stages where one has not at hand the modern methods as exhibited in a laboratory. Just the source of this collec-

tion of pus we are unable to indentify, though it may possibly have come from a slight laceration of the cortex of the kidney received when he had the blow on his side, as indicated in the above text dealing with the causes of peri-renal abscesses.

CASE 3.

Mrs. S. A. White, age 72. Admitted to the Baptist Hospital December 18, 1920. T. 98.3, P. 80, R. 24. Patient herself could give no history on account of her extreme illness. From her daughter we learned that she was operated on for an appendix abscess eight years ago. Since this time the resultant scar has been incised and pus evacuated about six times, the last time three years ago. Present illness: Seven weeks ago pain was noticed in the right hip and leg and from that date she has been confined to bed. Her daughter says she has had no fever though this can hardly be true. There were no urinary symptoms up to two or three days before admission to the hospital. At this time she complained of pain in the lower abdomen on urinating. The day before admission a pain was complained of in the right groin. Physical examination: The patient was an aged woman, quite stout. The right thigh was held flexed on the abdomen and she would not permit of its extension. In the right lower quadrant of the abdomen under the old appendix scar was a large boggy mass the size of a cocoanut that was neither tympanitic nor fluctuant. Just below this mass in the crease of the groin was a glossy reddened area distinctly fluctuant. No definite mass could be made out in the kidney region. The flexed thigh we interpreted as due to psoas irritation from the collection of pus. Blood: 24200 leucocytes with 83 per cent of polynuclears. Urine by catheter showed a heavy trace of albumen, marked reduction of Fehlings solution, a few hyaline and granular casts, a large amount of pus. Her condition was such that a cystoscopic examination was not thought advisable or possible without an anaesthetic.

A diagnosis of probable peri-nephritic abscess pointing below Poupart's was made

Operation Dec. 18th. an incision was made just below and parallel to Poupart's ligament evacuating a large amount of foul smelling thin pale yellow pus. The examining hand found the cavity to extend up posterior to the peritoneum into the peri-renal space. The patient died on December 28th. Through the operating incision the right kidney and pancreas were removed for examination. The mass in the right lower abdomen under the appendix scar was found to be a large omental hernia. The abscess had developed in the peri-renal tissues, dissected down along the sheath of the psoas muscle and pointed in the spot indicated above. Pathological report: Sections of the kidney showed a mild interstitial nephritis with hyaline casts within the tubules. There were no evidences to be

found of cortical or other abscesses. The pancreas showed a chronic interstitial pancreatitis with fat necrosis. The islands of Langerhans appeared normal.

CASE 4.

C. A. J., white, Blacksmith, age, 47, Bennettsville, S. C. Entered the Baptist Hospital November 30, 1919. Family history: Father living at the age of 70, mother died at 32 in labor. Five brothers, all in good health. Two sisters, one living, one died in labor. Claims he has never been sick previous to 1917. At some time during this year he had a severe pain in the epigastric region which was diagnosed by several doctors as ulcer of the stomach. There was no history of vomiting of blood nor any indigestion. Beginning some time about October 1918 he developed a cough and began to lose flesh. He had no chills, night sweats or fever he thinks. Present illness: About one month before entering the hospital he noticed a pain through the left kidney region which continued and soon became so severe as to necessitate his staying in bed. There quickly developed a high temperature with chills and sweats. Urine showed no blood to the unaided eye nor was there any difficulty or pain or frequency in urination. He was in bed for a month before entering the hospital during which time his weight fell from 165 or 170 to 140. On admission Nov. 30 T. P. R. Physical examination: Large, emaciated, septic man. Chest reported as normal by medical examiner. In the flank is a bulging mass occupying the area between the last rib and the crest of the ilium. This is flat to percussion and definitely fluctuant. A needle was inserted into this mass and thick yellow pus showing a pure culture of staphylococcus withdrawn. Blood examination: Leucocytes 19500, Polys 87 per cent, Lymphocytes 13 per cent, Haemoglobin 73 per cent.

Urine Normal.

Operation: December 1st, under ether. A three inch incision in the right flank, over the bulging mass was made evacuating about one pint of thick yellow pus. The kidney

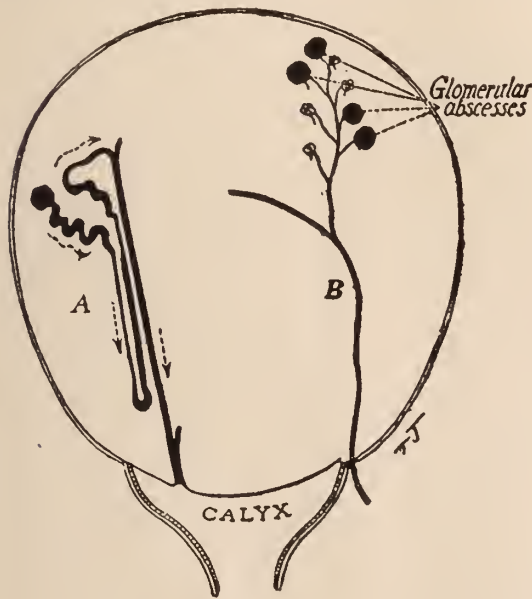


Plate No. 5.

Diagrammatic representation of mode of localization of hematogenous infections of the kidney.

A. Primary localization in a glomerular network with extension of infection downward through tubular system into apex of pyramid as indicated by arrows. This route explains how infection of one of the minor cycles takes place, and from here the entire renal pelvis is involved.

B. Primary localization of organisms in glomeruli of kidney when carried by the hematogenous route with resultant glomerular abscesses.

was not exposed. So far as the peri-renal abscess was concerned the man made a quick and uneventful recovery. We must say, however, that following the anaesthesia this man developed a marked cough with considerable expectoration. On December 7th I had his chest gone over by Dr. J. H. Gibbes who reported as follows:

"Marked contraction of both upper fronts, more marked on the right with distinct limitation of respiratory movement in the right chest. Vocal femitus increased throughout the right lung and over upper portion of left lung. Percussion note of poor quality, except over lower lobe where the note is relatively hyperesonant. Percussion note is extremely dull below the angle of the right scapular. Breath sounds have a distinct tubular modification over entire lung area except the lower lobe of the left lung. There is a distinct nasal quality below the left scapular. Numerous fine and medium rales are heard over the right lobe with a few clicks over both upper."

"The X-ray showed retraction of right chest with compensatory expansion of left side. Tuberculous infiltration of right chest from apex to base. Very dense triangular shadow on the right side between the sixth and seventh inter-spaces extending to the diaphragmatic line, but not to the periphery. Thickened pleura. There is probably a small amount of fluid on the outer side of the right base. Two annular shadows in the right apex-probably cavities. Moderate infiltrations (comparatively) on the left side, upper two-thirds. Left base is relatively clear. There is a large translucent area about the left hilum; probably a dilated bronchus. Aorta is somewhat enlarged; heart is small. The sputum contained numerous tubercle bacilli."

Comment on these last findings hardly seems necessary. Had we known the true situation as it was obviously our duty to do, we should have operated on this man under local anaesthesia. It is comforting, nevertheless, to know that the man, under proper care in his home town, promptly

began to gain in weight and strength, and Dr. Chas. R. May of Benneteville writes me under date of April 1922 that he began work in three months after operation during which time he gained 20 pounds, going up from 140 to 160. He now weighs 179 pounds, is in good health, working at his blacksmiths trade every day. Sleeps and eats well, no cough, and, in fact, appears to be in good health and sound physical condition.

URETERAL OBSTRUCTION

BY LEONARD J. RAVENEL, M. D.,
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I believe that those who have given the matter consideration will agree with me when I make the statement that the medical profession as a whole has been slow to appreciate the relative frequency and seriousness of this condition.

Acute ureteral obstruction is usually easily recognized, generally transient as commonly encountered, and reference is made to it in this article only as a forerunner of the chronic, and practically speaking incomplete types which are the ones so productive of disastrous trouble. These in the vast majority of instances have infection as an etiological basis. Possible exceptions include the cases due to kinking or twisting of the ureter from excessive mobility, abnormal development or location of the kidney or its vessels, or obstruction of the lumen of the tube from pressure or invasion by adjacent tumors. The writer believes the production of obstruction from simple distorsion of the ureter has received unwarranted notoriety; it unquestionably happens but in arriving at the conclusion one should be able to ascribe a definite reason for it and too often it cannot be demonstrated.

Stricture or stone alone or together form the actualities in the bulk of the cases met with, hence the assertion the trouble under discussion is mainly traceable to infection

because calculi are usually built upon nuclei of bacterial substances, and stricture as will subsequently be pointed out is intimately associated with it. Bearing these facts in mind, and having excluded more obvious causes as enumerated, it is well to consider the manner in which the more common obstructions originate.

The ureter normally presents three distinct points of narrowing, viz., near its junction with the renal pelvis; just above the brim of the true pelvis, and again at its entrance in the bladder. There are thus constituted points of predilection and when obstruction of whatever nature exists it is apt to be encountered in these locations, though no portion is exempt. Micro-organisms are probably being continually thrown off through the kidneys without exciting local reaction; that renal infection is often the result is likewise the case, and inasmuch as the ureters act as drains for it all it is not surprising they should suffer proportionately. Inflammations of the ureteral mucosa, walls and lymphatics provide the changes culminating in fibrosis and cicatricial contraction. Migration of a calculus is apt to leave trauma and abrasions in its wake which serve as portals of entry for microbes, attendant ureteritis and local results as described. Should a calculus become impacted the longer it remains so the more difficult becomes its removal because of the formation of scar tissue set up by its presence, and some of the worst occlusions occur in this way.

While somewhat theoretical, these points are pertinent and possess a direct bearing upon prophylaxis as well as upon treatment.

The diagnosis becomes fairly clear when a patient reports with a tale of aching and sharp pain in the loin referred along the course of the ureter, and especially when pus or blood is found in the urine. It is more or less evident when these symptoms are only severe enough to be uncomfortable, particularly when there is antecedent history of renal colic. There are numerous cases

however where salient features are wanting, the manifestations being varied and of character easily attributable, in the absence of gross physical findings, to disease of many other parts or viscera, notably the appendix, uterus, Fallopian tubes, ovaries, gall bladder or stomach. Examination of the urine affords no criterion. Vesical irritability is as a rule present but is apt to be ignored or made referable to neighboring pathology. Many well meaning but misguided operations have been performed upon the organs mentioned when the sole cause for the trouble lay in the ureter as subsequently proven in the particular instance. This is notably true of the appendix. Its exposure no doubt revealed a chronic inflammation of the lumen or coats in apparent vindication of the pre-operative diagnosis, but one has been struck by the relatively few normal appendices brought up in the routine of laparotomy among those large enough to deserve the anatomical appellation.

Where the therapeutic measures adopted for relief have proven futile due to the true nature of the disturbance having remained unsuspected and untreated, the unfortunate individual has generally become classed as an incurable neurasthenic. The incidence of the latter disease is rapidly becoming less with the advent of more thorough and painstaking methods of investigation.

As previously pointed out, most of these chronic obstructions are incomplete. My experience has been that occasionally they may be so slight as to produce symptoms solely by interference with the normal peristaltic activities and reflexes of the ureter and persist with no further progression for a long period of time. Complete occlusion results in cessation of renal function very quickly.

In reviewing the etiology set forth the word "chronic" necessarily implies a rather insidious onset. This characteristic, plus the continual stream of fluid from the kidney, tends to keep the pathway open and therefore absolute stoppage takes place in the face of difficulties. Increasing resistance

to the passage of urine however, soon leads to dilatation, first of the renal pelvis and later of the ureter above the point of stricture. As the matter goes on great distension of the cavities ensue; the relatively slight but continual pressure of the urine in the kidney pelvis effects a gradual atrophy of adjacent portions of the renal substance until eventually the organ is converted into a sac filled with fluid in association with hydro-ureter. With active infection on top of these changes, instead of fluid there is pus, more rapid destruction of the renal parenchyma, pyonephrosis and sepsis. Nephrectomy becomes the invariable indication.

Every day conception of the various nephritides and so-called "functional" disorders of the kidney takes no note of defective drainage possibly being an important predisposing or active factor from the reflex disturbances and congestion thereby produced. This is a matter worthy of thought.

There can be no question that the diagnosis of ureteral obstruction is best and often only made with the cystoscope, catheter, roentgen ray and technical procedures allied with them. In this connection I would like to state that resistance or difficulty encountered in the passage of a catheter in and up the ureter does not necessarily imply that an actual lesion exists. Intense and prolonged spasm frequently ensues upon the attempt to introduce a foreign body, particularly when the parts are inflamed. When it happens it may be overcome by waiting for relaxation to take place or this hastened by injections of a few drops of cocaine or novocaine solution against the barrier. Furthermore, the ureter sometimes pursues a very oblique and curved course through the musculature of the bladder which purely mechanically offers a great deal of trouble toward successful catheterization. The operator can readily interpret such findings in terms of pathology when in reality none exists.

The treatment of ureteral obstruction de-

pends as may be surmised upon its character, duration, extent and complications. Whenever feasible attempt should be made to relieve the condition *per ureteram*. The facility with which calculi of recent origin may be removed by dilatation, injection of lubricants and relaxants and traction by catheter, is quite remarkable. Others that from long impaction have formed dense cicatrices may require open operation. In these cases it is essential to consider the conditions present very carefully before proceeding, from the viewpoint of the eventual rather than immediate outcome expected. Conservatism works both ways and possibly nephrectomy would prove a better operation than anastomosis or transplantation of the ureter, assuming that these might be called for and that the opposite organ is functioning properly.

Should the dilatation of the ureter and renal pelvis be found such as to render evacuation of the contents impractical from the mechanics presented, even though means for ureteral drainage are provided, it is probably best to remove the kidney if the opposite organ is capable of carrying on demands which would thus be made upon it.

I have had very little success in getting by hard and extensive strictures with the various catheters and mechanical dilators on the market. Most of the latter are useful, as the name implies, for stretching the obstruction once it has been passed. Instead, I have been enabled to successfully treat quite a number, especially at the vesical end of the ureter by employing "stream-line" olivary bougies welded upon a small and flexible wire shaft through a close vision cystoscope of the McCarthy or Buerger pattern.

Prophylactic treatment is equally important. It implies close observation of the trend of events in the course of a renal infection, and should trouble indicative of ureteral blockage take place, exploration by means of the cystoscope should be carried out. I am convinced in the light of exper-

ience that this should also be done after an attack of renal colic which has not been fully relieved or explained as for instance by the external demonstration of a stone to show for it.

It is highly advisable to operate for calculus in the renal substance as soon as discovered, if possible or feasible to do so, provided it is causing irritation as shown by persistent pyuria.

One should go further by searching earnestly for foci of infection, which when present have a very direct bearing upon inflammatory renal troubles. Effort ought also to

be made to instruct the individual in hygienic principles summed up largely in the oft repeated axiom "modern in all things."

Modern medicine entails a severe drain upon the mental, physical and financial capabilities of the physician who endeavors to give his patient the best that is in him. It is to be hoped the revolution now taking place in the art will evolve a more rational method of practice alike of benefit to the sufferer and doctor. Probably this will eventually be arrived at through gradual education of the public in the principle that prevention is better than cure.

UROLOGY

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TUMORS OF THE URINARY BLADDER.

Tumors of the bladder are classified into those of epithelial, connective tissue, and muscular origin. There is also a heterotopic group.

Those of epithelial origin comprise more than 90 per cent of all bladder tumors. They consist of the papilloma, benign and malignant; the carcinoma, papillary, adeno, schirrus, and squamous-cell; the adenoma and cysts.

For the purpose of simplicity we will confine our remarks to the terms papilloma and carcinoma, these two types representing all commonly seen. All the other types are very rare. There is the benign and the malignant papilloma. The term papilloma includes both varieties, which make up more than 50 per cent.

Tumor of the urinary bladder is not an uncommon occurrence. According to statistics, carcinoma of this organ occurs about one in every two hundred carcinomata. There are about 100,000 deaths each year in the United States from cancer. Therefore,

about 500 of these are from cancer of the bladder. From 1910 to 1920, 333 malignant tumors of the bladder were operated on at the Mayo Clinic. In 1918, Geraghty reports a series of 180 cases of bladder tumors admitted to the John Hopkins Hospital. In 1920, Thomas reports a series of 62 in his clinic.

Until 1910 the treatment of tumors of the bladder was very disheartening. Surgery had been abandoned by a great many because the patients more often got along better without it. Implants could not be controlled. Recurrences were the rule and then most frequently multiple. Geraghty states that up to 1910 only one case of papilloma at the Johns Hopkins Hospital was cured by surgery. He also states that since then only one has been operated on there and that one was near the vesical neck and could not be reached with high frequency current through the cystoscope.

In 1910, Edwin Beer introduced the high frequency current (fulguration) to be used through the catheterizing cystoscope for the treatment of bladder tumors. This method of treatment fulfills the desideratum in from

40 to 50 per cent of the cases, being ideal for all benign and many of the malignant papilloma. It is not successful, therefore, for some of the malignant papillomata, and never for the papillary carcinoma or any other type of tumor that has invaded the bladder wall. Failure to yield to the high frequency current is conclusive evidence of malignancy.

The status of radium in the treatment of bladder tumors has not yet been definitely settled. For those malignant papillomata that resist fulguration, Geraghty has found it very useful. He has also found it helpful in those cases of papillary carcinomata that have not invaded or very lightly invaded the bladder wall. Judd thinks its best field of usefulness is in the inoperable cases, those that advanced so far that surgery cannot be employed or are so located in the bladder that resection is practically impossible.

While, in the last few years, some advances have been made in the surgical treatment of bladder tumors, the results are still far from brilliant. The technic has been developed with the idea of controlling implants. Judd has found that the results are about the same as those in resection of the stomach and intestines for carcinoma. In this procedure there is an immediate mortality of about 10 per cent. For the carcinoma surgery must still be employed, unless inoperable; never for the papilloma except when so located that it is not accessible for fulgurating wire or as not often happens the cystoscope for one reason or another cannot be used, or the papilloma does not yield to fulguration or radium. Thomas reports the combined use of fulguration, radium, surgery and the Roentgen ray. It is yet too early to estimate the value of this procedure.

There is good reason to believe that practically every carcinoma at one time was a papilloma, and that it represents a degenerative process. The vast majority give clinical evidence, especially by a history of hematuria, sometimes constant, but more often intermittent and transient of having

had the tumor for from five to twenty years. This has also been our experience. We also know that all benign papillomata are potentially malignant, hence, the importance of early diagnosis and appropriate treatment. Since the majority, at least, of the carcinomata were at one time papillomata and since the benign and most of the malignant papillomata are successfully treated by the high frequency current, we can be absolutely sure that if proper examinations were made early enough and a diagnosis made and proper treatment given, that we would rarely have to treat so disheartening a condition as carcinoma of the bladder. The cystoscope will enable us to diagnose practically all cases of tumor of the bladder. This is safe, accurate to a high degree, and simple. Thomas says, "The cystoscope is all important in differentiating the various vesical tumors, their nature, location and extent in order to determine the most appropriate and best form of treatment, and not the least as a periodic follow up to detect and control as early as possible any evidence of recurrence." Rectal examination, and vaginal in the female, and abdominal palpation sometimes are aids in the advanced cases. Cystograms are at times useful to determine the extent of the growth, and in cases where the cystoscope cannot be employed.

The symptoms, in order of frequency, that indicate a bladder tumor are: hematuria; pain over the bladder and sometimes radiating down the thigh and dysuria; obstructive such as occur in prostatic cases; renal colic when the growth is located in the bladder over the ureteral orifice; and constitutional symptoms. Every person who has a chronic cystitis should be suspected of bladder tumor and cystoscoped. A person above thirty who has had a hematuria and no subjective symptoms should be suspected and cystoscoped. Even if it should not be due to tumor, it would then likely be due to some other serious condition such as renal tuberculosis, calculus etc., and should in every case have a most thorough urological examination. Hematuria is the red flag of

danger and its signal should not be neglected. It is the first and only symptom in about 75 per cent of the cases for often over a period of years. Pain and dysuria are at times present. When the growth is around the vesical orifice there is apt to appear obstructive symptoms. Obstruction from the growth at the ureteral orifice causes renal colic, and produces hydronephrosis and pyonephrosis. Pus is frequently present in the urine from a secondary cystitis.

The cause of death in tumors of the bladder is more often due to loss of blood, renal insufficiency and infection, or some intercurrent infection than to metastases. Geraghty reports that "out of 27 coming to autopsy at the Johns Hopkins Hospital with very extensive cancers of the bladder only three showed metastases."

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PEDIATRICS

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Summer Diarrhea will soon again become the great cause of death amongst infants during their first two years of life.

The great majority of the deaths will occur amongst the artificially-fed, especially those who, since weaning, have been fed condensed milk or the other "baby foods" which are not used with and put into cows milk, thus depriving them of the tissue builder Protein. These babies are heavy enough but their weight is not due to muscle tissue, in which, physiology teaches us, resides the body's strength and resistance, but to an excess of fatty tissue. Hot weather plays havoc with the metabolic processes of these low resistance babies and they go down with digestive upset.

There will be many thousand cases of summer diarrhea in our State this summer, as is always the case, and I believe the majority of them can be prevented this year if every doctor will see that the artificially-fed babies in his practice who are not now getting cows milk are at once put upon it, at least one ounce per day for each pound of the baby's weight. This milk should be brought to a boil, or until it simmers, and then kept as near iced as possible until used.

To treat: When a loose stool appears don't give castor oil or other purgative, they are only intestinal irritants and will soon change a simple dyspepsia with a loose stool into a severe diarrhea and colitis.

Stop all food for twelve to eighteen hours and give, at four hour periods one ounce for each month of the baby's age, up to eight ounces, of soda solution (teaspoonful to a quart of water), or plain unboiled water. Now, though the stools may still look bad, start food which not only will not ferment itself, but which will check fermentation that is already present. Starches and sugars ferment and must be stopped. The one food that is almost universally successful is Protein Milk, this will not ferment and it does check existing fermentation.

The general practitioner cannot obtain freshly prepared protein milk, for his small town or country practice, but he can, through his druggist, or by ordering direct, get either Casec, which makes protein milk when mixed with cows milk and water, from Meade Johnson & Co., Evansville, Ind. or, in case cows milk of safe quality isn't had by the patient's family, Powdered Protein Milk, from Merrill-Soule & Co., of Syracuse, New York, this is prepared by simple admixture with water. Full directions and information is furnished by these reliable houses. Our summer diarrhea cases die of purging and starvation.

It would be interesting and, I am sure, very gratifying, to read next year's mortality statistics, if every doctor who treats babies would follow these simple but sensible rules for guidance in the prevention and treatment of this terrible summer scourge of babies.

NERVOUS AND MENTAL DISEASES

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IF IT BE TRUE-FOCAL INFECTIONS

In these trying days of medical science when the last word is being spoken almost every day, and especially at all gatherings together of talent arrayed against cryptogenic powers of disease, it is so difficult for us to express an idea that is truly original that we are compelled to keep ourselves prepared to have our pride justly wounded when our readers-if we should have any, fail to applaud us when we try to adduce some of the latest facts.

Surgeons, practitioners and various specialists are less interested at present in the broad principles that Dr. Cotton is fastening into his theory of the causes and treatment of many cases of insanity and mental deficiency, than psychiatrists and psychologists who are always behind in working out their crops of troubles. If, however, Dr. Cotton succeeds in establishing his theory upon the reduction of the number of cases of insanity and mental deficiency in the state of New Jersey, the dentists and throat specialists shall have to add another hour to their daily toil. Supporters of the hereditary theory of the cause of mental disorders and subnormal intellectual development must sacrifice volumes of literature, and a tidy number of the afflicted may yet rejoice over a more favorable prognosis.

Dr. Cotton charges psychiatrists with separating the function of the mind from the brain in their effort to circumvent his work. We have never been fully satisfied with what theories we have on the workings of mind, but it does not seem necessary to divorce it from the functions of the brain

to entertain some feeling of doubt about his theory. It is not difficult to understand that if a psychosis such as delirium tremens be caused from the imbibition of alcohol, that an acute disease or occasionally an operation with hemorrhage and shock may produce an acute hallucinatory confusion, that syphilis may cause a perversion of the mind, or that pellagra may result in a toxic delirium, so also, infections of the teeth or tonsils may give rise to intellectual incapacity. We should rather expect to see a much larger number of outbreaks if we are to attribute the direct cause to noxious substances arising from foci of infection.

Sufficient data has not been obtained to offer statements in condensed form, which is much to be desired in these columns. We therefore, introduce the claims with the idea that they offer a fine opportunity for bringing physical relief to many neglected cases, and which may be the means of alleviating some of the mental disorders. A well organized clinic for the elimination of focal infections is worthy of its existence by reason of the physical improvements it should accomplish, and whether the destiny of a large percentage of individuals hangs upon the degree of their innate potentiality for intellectual development or is based upon the stability of inherent powers governed by hereditary influences with precipitating causes such as various infections measuring their value, or whether a larger percent than we think are "born free and equal" mentally, we prefer to add our commendation to the work without wishing to underwrite the theory upon which it is based.

PATHOLOGY AND BACTERIOLOGY

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FATTY DEGENERATION

Fatty degeneration is the deposition of fat in cells which, because of some change in their normal processes, are not able to properly oxidize it. This process was formerly claimed to be a metamorphosis, or change of one type of tissue to another, but at present it is said to be a deposition of normal fat in normal quantities in a cell which can no longer dispose of it in the ordinary way.

Of the factors which may cause fatty degeneration, poisons appear to be the most important. They may be metallic, as arsenic, mercury, lead, phosphorus, etc. Such poisons as chloroform, ether, and the acids apparently affect directly the cell metabolism. Any compound which breaks up the red corpuscles or directly binds or reduces hemoglobin likewise cause fatty degeneration. Bacterial poisons seem, in some obscure way, to be responsible for its development.

Local disturbances of nutrition such as congestion, thrombosis, embolism, in tumors, and in tuberculous and syphilitic areas, if not too rapid in development, may result in fatty degeneration. In the thymus, uterus, corpus, luteum, etc., during involution the process is common.

Commonly an organ the site of fatty degeneration is somewhat increased in size; to this, however, there are many exceptions. This is notable in acute yellow atrophy of the liver. The normal consistency is decreased, but if fibrosis be present the con-

sistency varies with the quantity of fibrous tissue. The specific gravity is always decreased. Pale yellow is the usual color but existence of congestion, pigmentation, or jaundice will obviously alter the shade. The affected areas may be definitely local or the entire organ may show uniform involvement. In the severer grades of fatty degeneration, fat droplets may be seen, macroscopically, on the blade of a sectioning knife.

Microscopically, the parenchymatous cells are first and most uniformly affected, although the supporting connective tissue framework may show the degeneration as well. The normal protoplasmic granulations disappear and in their stead, dark, fine granules appear and, when stained with osmic acid, give a black color. These granules are dissolved by alcohol and ether but not by acetic acid. When the fat is dissolved out of the cell, a vacuolated appearance is noted in the cytoplasm. After a time if the causative agent is not removed, the cell membrane breaks down and the space is filled with granular detritus.

Fatty degeneration may occur in almost any tissue, parenchyma of organs, nervous tissue, connective tissue, etc. Fatty degeneration tends to cause secondary changes in the protoplasm of the affected cell, or the degeneration which in the first instance underlies the condition tends to increase until the cell is practically destroyed. Therefore, cellular function is eventually impaired or perverted. Mild grades of the degeneration with preservation of the nuclei of the cells, admit of recovery; severe grades go on to total destruction.

DERMATOLOGY AND SYPHILOLOGY

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THE PRESENT STATUS OF THE WASSERMANN REACTION

In the March number of the Journal I discussed some of the new problems in the diagnosis and treatment of syphilis. Particular stress was laid on the fact that writers on the subject of syphilis have concluded that the manifestations of syphilis have undergone many changes since the introduction of salvarsan. We spoke of the importance of repeated dark field examinations on all genital sores; the most valuable and reliable method we have in the early diagnosis of syphilis. It now remains to take up the next aid we have in the diagnosis of syphilis, namely the Wassermann reaction.

There is more literature on the Wassermann reaction than any other subject in medicine. The actual technic seems to be undergoing some minor changes, causing considerable controversy among the experts as to the best method of performing the test. In all of the controversy, however, the general principles of the test have remained the same. There is not any doubt expressed in the writings of the experts on the ability of the distinctly positive Wassermann to denote syphilis. I say distinctly positive Wassermann for it is well known that certain conditions of the blood other than syphilis can in a small way influence the test sufficiently to sometimes cause some confusion in border line cases, especially when particularly sensitive antigens are used. Interpretation of the Wassermann, like anything else in medicine that is done properly, should include all the other facts. To rely entirely on the Wassermann is as poor judgment as to discard it entirely.

In many of the large institutions of the country, of late years, a routine Wassermann has been made on all patients admitted. Reports from these institutions show from 10-16 per cent of positive Wassermans the majority of which were never suspected of being luetic. In the February issue of the Archives of Dermatology and Syphilology Kilduffie reports 12 per cent of positive Wassermans on 484 supposedly nonsyphilitic patients; and concludes that "this is sufficient evidence to indicate the advisability and value of a routine Wassermann test on all patients admitted to the hospitals at least; not so much from an epidemiologic or statistical point of view, but as resulting in the initiation of truly specific therapy in a certain number of cases otherwise missed. For these reasons the practice is to be strongly urged and recommended." I would go farther and urge the advisability of a routine Wassermann on all patients that consult a doctor. If 12 per cent of patients admitted to the hospitals are luetic there is ample reason to believe that every physician has a certain number of unrecognized luetic patients in his practice. Are we going to educate the public to the advisability of this procedure, or wait until they learn more and demand it of us?

The collection of blood for the Wassermann can be simplified by using the Keidel Wassermann tube, or some modification. It is a vacuum tube with a sterile needle, and very easy for any one to collect blood in the patient's home or office. A very good one can be bought from the Steele Glass Co., 622 Locust Street, Philadelphia, Pa.

PUBLIC HEALTH

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MILK AS A HEALTH FACTOR

So much has been spoken and written of late concerning the danger of impurities in milk, that the public is beginning to look with suspicion upon this very important article of diet.

This is especially unfortunate because milk constitutes one of the most important foods that we possess, and plays a very essential part in the dietary of the infant, the invalid and the convalescent.

Milk is one of the few perfect foods that we have—containing as it does, proteins, carbohydrates and fats in proper proportion for sustaining life. It also has certain mineral salts that are essential for tissue growth; and is especially rich in vitamins—those mysteriously elusive elements without which, neither our children or our scientific literature could properly thrive nowadays.

The very constituents which render milk a perfect food, also make it a desirable pabulum for the growth of bacteria; so that while pure clean milk is a beneficial necessity, contaminated milk may be responsible for the spread of a great many ailments—notably typhoid fever and the diarrheal diseases. This danger is augmented by the fact that milk is usually consumed in its raw state.

It is gratifying to note that with modern methods of handling milk, the dangers of disease contamination may be absolutely eliminated, so that the ordinary care in the production and supervision of this product, the milk borne epidemic may be relegated to the distant past.

Most municipalities now supervise the

production of its milk supply, and a great many cities supplement this supervision with laws requiring proper pasteurization—which, while not an absolute “cure all,” is at least the greatest single safeguard that can be placed around the handling of this product.

While it is practically impossible to produce a sterile milk, this is not at all necessary, since the majority of the bacteria usually found in milk is of the lactic acid variety, and exerts more of a beneficial than a harmful influence upon the consumer. It is only occasionally that a pathogenic organism contaminates a milk supply, and this usually happens through human carelessness, and the contamination is usually from some human source.

The greatest single danger from the bovine diseases that may be transferred in the milk is Tuberculosis; and the enforced tuberculin testing of cattle by health officials is reducing this danger to a negligible quantity.

The dangers lurking in milk, then, are very slight and may easily be overcome. The beneficial results obtained through the use of milk can be obtained through no other single agency. It is not only a perfect food for the infant, but is a very necessary article of diet for the growing child.

Its value in combating the malnutritious of the growing child is especially apparent. One needs but to go into a schoolhouse and ask all children who regularly drink milk to raise their hands, and then compare them with their little neighbors who either do not care for, or are unable to get milk to drink, and he will be readily convinced that milk is a decided factor in the promotion of health.

INTERNAL MEDICINE

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METABOLISM IN DIABETES

If one should look through some of the more technical of our medical journals he would be struck by the amount of work that is being done on the subject of metabolism in the diabetic. The object of this brief outline is to point out some of the more prominent features of the work.

In general the oxidation that goes on in our bodies after the food is assimilated is practically unaltered in the diabetic. That is, the basal metabolic rate, is about the same for a person of the corresponding age, sex, height and weight whether diabetic or not. When variations occur they can be accounted for usually by other factors that if present would change the rate of a non-diabetic individual to the same extent.

The inability of the body to burn the usual amounts of carbohydrates present in the average diet, is, of course, the main feature of the disease. In calculating the tolerance for glucose it is necessary to take the sum of all the glucose present in the diet no matter from what source. Since the fats are capable of yielding 10 per cent and the proteins 52 per cent of glucose, respectively, it is necessary to add this to the sum of the starch taken as such. The ability of the body to utilize sugars is impaired by the use of a high protein diet even further than would be expected by the glucose yield and the ketones produces. This observation is not satisfactorily explained.

Since proteins may yield 52 per cent of their weight in glucose it would appear that they should be avoided almost as much as starches. It is necessary, however, to maintain the body in a state of nitrogenous

equilibrium, in order that the body may not have to utilize the endogenous proteins. The tissues must be replaced by proteins. It has been found that one gram of protein for every kilo of body weight is sufficient to maintain the necessary balance. A diet containing proteins in excess of the amount necessary for the maintenance of a nitrogenous equilibrium will unnecessarily increase the basal metabolism and reduce the tolerance for sugars.

One must look to the fats as the greatest source of food for the diabetic. In order for the fats to be of any service it is necessary for the body to be able to burn small amounts of starches. For fats to be used at all, at least 10 per cent of glucose is required to aid in their combustion. If the body is not able to burn at least a small amount of starch the outlook for the diabetic is indeed poor. In contrast with the protein the fat does not depress the amount of sugar that is tolerated, nor does it increase the basal metabolic rate to anything like so marked an extent.

From the fatty acids and certain of the amino-acids of the protein molecule ketogenic substances are derived. These substances are the causative factors in the production of what is known clinically as "acidosis." The anti-ketogenic substances are glucose and the glucose yielding amino-acids of the protein and the glycerol of fat, which, too, is known to be capable of producing glucose. In order that these ketones shall be produced in amounts which will either neutralize one another or else have the balance in favor of the antis, it is necessary to arrange the diet so that the patient will receive about one gram of fatty acid to one-half gram of glucose.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

ULCERS IN THE RIGHT UPPER ABDOMEN.

It is possible to cure an acute duodenal or gastric ulcer by medical therapy, in contradistinction to surgical or operative interference. It is not possible to cure a chronic one, except by surgery. Not all of them are entirely relieved, though the vast majority are greatly improved.

The true etiology of ulcer formation is not yet universally accepted.

It is possible to produce an ulcer of the progressive type in animals by experimental technique. Rosenow has done some excellent work along this line.

It is difficult and in many cases often impossible to definitely interpret a right upper abdominal symptomatology.

Ulcer occurs three times more frequently in the male than in the female, and cholecystitis, with or without stone formation, occurs approximately three times more frequently in the female than in the male.

The clinical history obtained by one well trained in history taking is far and away the one most important factor in establishing the diagnosis.

The chronicity, with periodicity of symptoms, seasonal recurrence, hunger pain and food relief are a few of the more characteristic symptoms upon which to base the diagnosis.

Physical examination with abdominal palpation in chronic cases, without mass formation, is of almost as negligible value as are the common laboratory examinations in most instances.

Hyperacidity is the rule in ulcer cases, and hypo- or anacidity is the rule in malignancy, though they are by no means constant or pathognomonic. Either may be

present in chronic appendicitis, cholecystitis, luetic hepatitis, splenic or even certain pelvic disorders.

Chemical examination of the gastric or duodenal contents as well as the search for occult blood have a more marked impression on the patients mind than they have value in establishing the diagnosis in the mind of the experienced surgeon.

Occult blood is found at times in stools of patients suffering from toxic cholecystitis, pancreatic, and splenic disorders, as well as in cases of chronic appendicitis or malignancy of some portion of the gastro-intestinal tract.

A positive or negative X-ray examination for ulcer is of value only when performed and interpreted by an experienced Roentgenologist.

In questionable right upper abdominal lesions with gastric symptoms of a chronic nature, it is often of value to determine the presence or absence of gastric retention. This may be done by filling the stomach with water or with air and outlining its size by percussion.

It may also be ascertained by giving a test meal, and one hour later removing its contents by means of a stomach tube, or, again, it may be determined by allowing the patient to eat a full meal, and eight or ten hours later, removing the residue by means of a tube passed into the stomach through the mouth. Either of the above procedures are almost of as much value as in fluoroscopic study after bismuth or barium intake.

The diagnosis of gastric or duodenal ulcer, therefore mainly rests upon the correlation of the symptoms as stated by the patient, the accessory findings of the laboratory and X-ray, as well as upon the judgment and diagnostic skill of the attending

surgeon, who himself must have handled many cases of a similar nature.

Every surgeon has at times been in doubt, even with the abdomen opened and the viscera lying in plain view as to whether or not the patient has an ulcer.

In such instances the thing to do is to open the stomach or the duodenum, and inspect the mucosa itself.

Usually this "dispells the darkness and reveals the light of day."

BOOK REVIEWS

HEALTHY LIVING—Book One. How Children Can Grow Strong for Their Country's Service. By Charles-Edward Amory Winslow, D. P. H., Professor of Public Health, Yale Medical School, and Curator of Public Health, American Museum of Natural History. Enlarged edition with a chapter on physical exercises by Walter Camp. Charles E. Merrill Company, New York and Chicago.

HEALTHY LIVING. Book Two. Principles of Personal and Community Hygiene. By Charles-Edward Amory Winslow, D. P. H., Professor of Public Health, Yale Medical School, and Curator of Public Health, American Museum of Natural History. Enlarged Edition, with a chapter on "Sport and Health" by Walter Camp. Charles E. Merrill Company, New York and Chicago.

THE PRACTICAL MEDICAL SERIES. Comprising eight volumes on the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. A., Professor of Physical Diagnosis in the Northwestern University Medical School.

Volume VIII. Nervous and Mental Diseases. Edited by Peter Bassoe, M. D., Associate Professor of Nervous and Mental Diseases, Rush Medical College. Series 1921. Chicago: The Year Book Publishers, 304 South Dearborn street.

THE PRACTICAL MEDICINE SERIES. Comprising eight volumes of the year's progress in medicine and surgery. Under the general editorial charge of Charles L. Mix, A. M., M. A., Professor of Physical Diagnosis in the Northwestern University Medical School.

Volume VII. Skin and Venereal Diseases. Edited by Oliver S. Ormsby, M. D., Professor and Head of the Department of Skin and Venereal Diseases, Rush Medical College, and James Herbert Mitchell, M. D., Assistant Professor and Chief of the Syphilis Clinic, Department of Skin and Venereal Diseases, Rush Medical College. Series of 1921. The Year Book Publishers, 304 South Dearborn street, Chicago.

TUBERCULOSIS IN INFANCY AND CHILDHOOD. Lectures delivered at the Children's Hospital, Philadelphia, under the auspices of the Philadelphia Pediatric Society. By J. Clepton Gittings, M. D., Professor of Pediatrics in the Graduate School of Medicine, University of Pennsylvania; Visiting Physician at the Children's Hospital, Philadelphia; Assistant Pediatricist at the University Hospital, and Frank Crozer Knowles, M. D., Professor of Dermatology in the Jefferson Medical College; Clinical Professor of Dermatology in the Women's Medical College; Dermatologist to the Presbyterian and Children's Hospital; Chief of the Skin Dispensary in the Pennsylvania Hospital, and Astley P. C. Ashhurst, M. D., Associate Professor in Surgery, School of Medicine, University of Pennsylvania. With 23 illustrations. Philadelphia and London, J. B. Lippincott Company.

Tuberculosis has been studied by more investigators than probably any other single disease and much progress has been made towards its prevention and arrest. In the domain of childhood much remains to be settled, but the author has made a distinct contribution to the subject from that standpoint. It is a book of 273 pages. Price \$5.00.

BOOK ON THE PHYSICIAN HIMSELF—
From Graduation to Old Age. By D. W. Cathell, M. D. This is the vastly improved Crowning Edition. Published by the Author, Emerson Hotel, Baltimore, Md.

No single book ever published in America has influenced the physician himself so much as this one. Few physicians in the past thirty-five or forty years have failed to provide themselves with a copy. The author has taken advantage of the opportunity to revise the book in the light of modern thought. A multitude of changes have been noted in the practice of medicine in recent years and most always the author has commented upon. The young physician especially should keep this volume and the code of medical ethics close at hand for guidance.

RADIUM THERAPY. By Frank Edward Simpson, A. B., M. D., Professor of Dermatology, Chicago Polyclinic; Adjunct Clinical Professor of Dermatology, Northwestern University Medical School; Attending Dermatologist to Mercy Hospital, Alexian Brothers Hospital, Henrotin Hospital, etc.; Former President American Radium Society; Former vice Chairman, Section of Dermatology and Syphilology, American Medical Association; Director of the Frank Edward Simpson Radium Institute. With 166 Original Engravings. St. Louis, C. V. Mosby Company, 1922

Few works published in this country are so comprehensive as the book under review. The author has touched almost every field of Radium activity. The use of this agent in various branches of medicine has been clearly elucidated. The illustrations are very numerous and very good. A large number of cases are thus illustrated. The references are unusually complete. The price of the book is \$7.00.

MANAGEMENT OF THE SICK INFANT. By Langley Porter, B. S., M. D., M. R. C. S. (Eng.), L. R. C. P. (Lond.), Professor of Clinical Pediatrics, University of California Medical School; Visiting Physician, San Francisco Children's Hospital; Consulting Pediatrician, Babies' Hospital, Oakland; Consulting Pediatrician, Mary's Help Hospital, San Francisco; and William E. Carter, M. D., Assistant in Pediatrics and Chief of Out Patient Department, University of

California Medical School; Attending Physician, San Francisco Hospital, San Francisco. Illustrated. St. Louis, C. V. Mosby Company, 1922.

It is refreshing to review a book out of the ordinary from the stereotyped plan of presenting a subject. After all, the practitioner desires assistance from text books from the standpoint of the patient, what to do for him and how to do it. Without going exhaustively into anatomy and physiology, the authors launch directly into ways and means of treating the patient, that is, the sick infant. The illustrations are creditable, especially illustrating the technic of various injections, intraperitoneal, etc. The methods of collecting blood for diagnostic purposes, the technic of spinal puncture, also gastric lavage, bowel irrigation, collection of urine, examination and treatment of the eye, ear, nose and throat. A great many of these procedures have been illustrated in a clever manner and deserve special mention. Under the head of drugs, numerous formulae are given which have been of value to the authors. It is a book of 654 pages and the price is \$7.50.

THE PLACE OF VERSION IN OBSTETRICS.

By Irving W. Potter, M. D., F. A. C. S., Buffalo, New York. Obstetrician-in-Chief, Deaconess Hospital and St. Mary's Maternity Hospital; Attending Obstetrician, City Hospital; Consulting Obstetrician, Columbus Hospital, Buffalo Homeopathic Hospital, and Salvation Army Home. With 42 illustrations. St. Louis, C. V. Mosby Company, 1922.

The profession has looked forward with keen interest to the appearance of Potter's monograph on Version. The author has given a creditable review of the history of version up to the present time. Indeed, more than half of the monograph is devoted to this phase of the subject. Then the author describes his own methods of version as much of which as he states has received marked criticism in various parts of the country, and yet he feels that his methods are gradually given recognition. The printers deserve commendation for the admirable way in which the book appears. The printing and especially the illustrations are remarkably good. The book has 137 pages and the price is \$5.00.

SURGERY OF THE PERIPHERAL NERVES.

Surgical and Mechanical Treatment of Peripheral Nerves By Byron Stookey, M. D., Associate in Neurology, Columbia University; Assistant Professor of Neurosurgery, New York Post-Graduate Medical School and Hospital. With a Chapter on Nerve Degeneration and Regeneration by G. Carl Huber, M. D., Professor of Anatomy, University of Michigan. Octavo volume of 475 pages with 217 illustrations, 8 in colors, and 20 charts. Philadelphia and London: W. B. Saunders Company, 1922. Cloth \$10.00 net.

The Surgery of Nerves has been greatly extended in recent years. The world war did much toward this end. The writer of this book has made a notable contribution to the literature. The illustrations are particularly well done, a very important matter in a book on neurological surgery. There are 475 pages.

PRACTICAL INFANT FEEDING. By Lewis Webb Hill, M. D., Junior Assistant Physician to the Children's Hospital, Boston; Assistant in Pediatrics, Harvard Medical School. Octavo of 483 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$5.00 net.

Dr. Hill has in this book succeeded in writing a book that will be of practical help to the practitioner and yet is scientific. It will help him to understand his feeding cases and he will be guided by sound scientific principles in his practice. The author states that he has endeavored to affect a common sense combination of science and practice. He claims not to follow any "school" of infant feeding. Dr. Hill is well-known in the Southern States and anything from his pen is usually received in this section of the country with respect.

THE THYROID GLAND. Clinics of George W. Crile, M. D., and Associates at the Cleveland Clinic, Ohio. Octavo of 228 pages, with 106 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth. \$5.00 net

The study of the Thyroid Gland in recent years has advanced with great rapidity. Dr. Crile and his associates have contributed as much, if not more, than any other investigators in this country. The book should prove of great help to both the surgeon and the internist.

THE MEDICAL CLINICS OF NORTH AMERICA (the New York Number) (Issued serially, one number every other month). Volume V, No. IV, January, 1922. By New York Internists. Octavo of 214 pages, with 38 illustrations. Per clinic year (July, 1921, to May, 1922), Paper \$12.00; Cloth \$16.00 net Philadelphia and London: W. B. Saunders Company.

Among the excellent articles in this number are the following:

Contribution by Dr. Warfield T. Longcope, New York City Epidemic Jaundice with Special Reference to Mild Form Occurring in the United States, page 957.

Clinico-Pathological Conference of Drs. Albert R. Lamb and William C. Von Glahn, page 969.

Presbyterian Hospital, Staphylococcus Aureus Endocarditis, page 969.

Clinic of Dr. Harlow Brooks, University of Bellevue Hospital, Medical College the Treatment of Pneumonia, page 993.

Clinic of Dr. Bret Ratner, Protein Sensitization Clinic for Children, New York Nursery and Child's Hospital, Rabbit Hair Asthma in Children, page 1129.

Clinic of Dr. Herman O. Mosenthal, Post Graduate Medical School and Hospital, The Treatment of High Blood-Pressure, page 1139.

AN ESSAY ON PHYSIOLOGY OF MIND. By Francis X. Dercum, M. D., Ph. D., Professor of Nervous and Mental Diseases in the Jefferson Medical College, Philadelphia. 12 mo of 150 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$1.75 net.

This is an excellent monograph by an author of national reputation. The writer has endeavored to present a practical resume of the subject and has kept in mind not only the physician, but the layman.

SOCIETY REPORTS

MARION COUNTY

On April 11th the Marion County Medical Society met at Mullins and reorganized, with the election of the following officers:

President: Dr. E. M. Dibble, Marion;
Vice-Pres., Dr. C. F. Bullock, Nichols;
Secretary, Dr. F. L. Martin, Mullins.
F. L. Martin, M. D., Secretary.

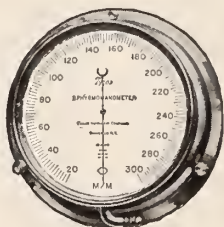
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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

EDITORIAL

ASSOCIATED THORACIC AND ABDOMINAL DISEASE.

There is no disease that lives in one cavity unto itself alone. Gall stones and cholecystitis may cause an irritable myocardium with premature contractions that cease after cholecystectomy. Vagal stimulation from liver disease may produce a bradycardia. Mitral stenosis may cause congestion and enlargement of the left lobe of the liver simulating gastric cancer with a palpable tumor. (Riesman). Any tragedy of the upper abdomen, gall stones, gastritis, perforated ulcer or renal colic may be mocked and mimicked by an angina pectoris that rises up from the epigastrium. Belching and gastric distention may accompany this squeezing agony. The pain of angina may be referred throughout the abdomen or thorax. The terrible agony of coronary thrombosis or embolism may be

ushered in by abdominal symptoms of pain, vomiting and leucocytosis. Too often are cardiac tragedies smeared over by the varnish of a name called "acute indigestion." Aortic aneurysm, particularly during or preceding rupture, may produce variable abdominal symptoms. Referred pain to the interscapular region may be of service here in the diagnosis. Bloating and belching after meals without pain warrants the taking of the blood pressure and the examination of the heart.

Advanced myocardial failure may be accompanied by complaint of severe abdominal pain. Ascites is usually present at this stage and the pain may be due to a localized area of pericarditis. I have known the liver at this stage of myocardial decompensation to be so enlarged and raised from below by the distended intestines that it was mistaken for a tumor. The patient was removed to the hospital for operation but a sudden con-

gestive cardiac death permitted a necropsy that revealed the cardiac source of the tumor. Indeed ascites alone and unaccompanied by edema of the extremities is usually peritoneal in origin. Tumors of the abdominal wall may occur during or after pneumonia and are usually due either to hemorrhage or abscess in the muscle. One case of malignant endocarditis due to the streptococcus viridans, in addition to multiple petechiae on the abdomen, showed internally a large embolus plugging one of the mesenteric arteries with moist gangrene of a segment of the intestine. Death occurred just before intestinal rupture though there had been complaints of midline abdominal pain.

F. W. McRae has just reported a case of a carbuncle in a man of thirty which was followed by a left perinephritic abscess, then by a left thoracic empyema which pushed the heart so far to the right with torsion of the aorta that an attack of severe angina ensued.

Indeed in emphysema, fibroid lung and adhesive pericardium abdominal symptoms may arise before the cardiac symptoms become prominent. Hemorrhoids from congestion of the hemorrhoidal plexus may be cardiac in origin. With nervous states accompanied with palpitation of the heart, there may occur also the throbbing of the aorta, the dynamic aorta, so disturbing to the nervous woman. With sprue, hook-worm disease and pellagra, anemic murmurs may develop in the heart. Endocarditis and myocarditis may develop in typhoid, and in malarial cachexia with the enlarged spleen and advanced anemia the cardiac symptoms may be pronounced. Pick's disease, with simultaneous serous effusion in the pleural, pericardial and peritoneal cavities illustrates

the involvement of the serous membranes in the thorax and abdomen.

The hook-worm goes through the lungs and bronchi down the esophagus to its intestinal home, and reversely the round worm, the *Ascaris*, may migrate from the intestines into the lungs and cause pneumonic symptoms or even a pyopneumothorax. I have seen a case of hysterical dyspnea lasting seven years cause an emphysema with abdominal distention and ptosis of the stomach and liver. A large hydrothorax may cause a collapse of the diaphragm on the affected side with ptosis of the abdominal contents adjacent.

Pulmonary tuberculosis is often complicated by intestinal tuberculosis, in probably a larger proportion of cases than we have suspected.

Mediastinal tumors may produce abdominal symptoms of passive congestion from obstruction of the inferior vena cava. Cancer of the cardiac end of the stomach may produce symptoms that are entirely esophageal in character. I saw such a case in a negro man of fifty whose life was prolonged when past the operative stage by systematic dilatation of the cardia. Malignancies anywhere in the abdomen should have a fluoroscopic or ray study of the lungs and mediastinum to determine if metastases have occurred in the thorax. Conversely malignancies of the lungs or mediastinum should have similar studies of the alimentary tract. So ordinarily as harmless a disease as angio-neurotic edema in its laryngeal, esophageal or intestinal attacks may simulate acute thoracic or abdominal disease. William Mayo reports several such cases on which he has operated only to find localized edema in the intestinal wall.

Stewart R. Roberts, M. D.

Atlanta, Ga.

ORIGINAL ARTICLES

MAGNESIUM SULPHATE AS AN AID IN ANESTHESIA

By G. T. Tyler, M. D., Greenville, S. C.

Magnesium sulphate was first discovered by Dr. Nehemiah Grew in 1694. It was produced by evaporating the water from a spring at Epsom in Surrey, England. For more than two centuries it has been used as a cathartic; but only within the past twenty five years have additional properties been found and applied to medicine. Working in the Rockefeller Institute, Dr. Sam'l. Meltzer discovered its anesthetic effect when injected into the brain of an animal. He also made use of it intra-spinally to control convulsions in tetanus; and later applied it to the duodenal mucosa at the opening of the common duct producing a relaxation of the sphincter of Oddi. Lyon has made application of this discovery in his 'biliary tap.'

The first of Dr. Meltzer's discoveries was not made applicable to clinical medicine until Pellini suggested combining Epsom salt with morphine. He and Gwathmey conducted animal experiments, using 2cc. of a 25 per cent solution combining it with morphia in $\frac{1}{8}$ grain doses. This repeated twice at half hour intervals produced analgesia sufficient to permit clamping the skin without pain. Inhalation anesthesia induced in an animal so prepared was possible with a much smaller amount of anesthetic. The relaxation was excellent; the condition of the animal was at all times good. The same method applied clinically made the induction of narcosis almost free from the excitement stage.

Wound pain, distension, and post-operative nausea were all diminished.

Combined action of medicines is common knowledge. Morphine with atropine, morphine with scopolamine, opium with belladonna, sulphonal with trional, are familiar to us all. Morphine with magnesium sulphate, I hope, will soon be as well known.

It is not known how the combined use of these drugs acts; but it is thought that morphia is held in contact with the nerve tissues for a longer time when magnesium sulphate is used with it. The combination increases the value of morphine from fifty to one hundred per cent. The effect of the morphia is prolonged, not intensified. But if anesthesia is induced with nitrous oxide, the effect of the nitrous oxide is intensified, and the anesthesia deepened.

Since the action of the morphine is prolonged, less will be required to relieve pain or discomfort when used with Epsom salt. Again, since one of the unpleasant effects of its use is the nausea on recovery from the drug, another advantage is gained in using smaller amounts.

From these observations, Gwathmey and Greenough have worked out a method, producing what they term *synergistic analgesia*. By the combined use of these drugs, they produce in the patient a state of analgesia; in which state he is anesthetized with nitrous oxide, ether, or novocain. Their method is as follows: 30 to 50cc. of a 25 percent solution of chemically pure magnesium sulphate is diluted to 300-500 cc. with sterile water, and given subcutaneously two hours before operation. At the same time morphine in $\frac{1}{8}$ grain doses is given hypodermically at half hour intervals for two, or if necessary, three doses. Narcosis is induced with little or no excitement, relaxation is ample, and less anes-

thetic is required. The patient at all times has good color, the pulse and respirations are normal; and post-operative discomfort greatly reduced. Some of their patients required no sedative, others needed it after several hours, and that only once or twice.

Impressed by the work of these authors, I employed the method; and while my results do not equal theirs, I am convinced of the great value of the contribution they have made, and I shall continue to make further use of it. While the records show that less morphia was used after operation, the nurses have attested to the quietness, and lack of restlessness of the patients. I administered the magnesium sulphate in 20cc. amounts, repeating in one half hour instead of giving it all at one time, diluted with sterile water. Morphia was used as they direct. Ether, and occasionally novocain was the anesthetic. The patients went to sleep with little excitement; and recovery from the anesthetic was much more quiet. Besides, the condition during the operation was remarkably good. I have not yet used the combination for post-operative pain; but am certain that its benign effect can be had in this stage also. An eighth of morphine with 2cc. of magnesium sulphate hypodermically is advised by the authors quoted.

Hrs. po. when
morphia was given.

1. M. B. subtotal hysterectomy, appendectomy, fistula in ano.	4
2. J. A. P. acute appendix (Mgso+ 30 min. before op.)	3½
3. E. Appendix Abscess	no morphia
4. A. P. total hysterectomy appendectomy	8
5. Acute appendix	no morphia.
6. L. G. abscess of leg	no morphia
7. Mrs. T. removal rt. tube, ovary and appendix: resection intest.	13
8. F. B. fistula in ano, partial Whitehead	9
9. Miss S. removal rt. tube ovary, appendix	14 hours
10. Mr. N. direct inguinal hernia	no morphia
11. M. McD. thyroidectomy	2¼
12. V. M. v. v. fistula, removal tubes, ovaries, appendix, tubercular peritonitis)	6
13. Mrs. R. total hysterectomy, appendectomy	8
14. Mrs. C. thyriodectomy (exophthalmic goitre)	3
15. Mrs. B. complete breast (30cc. diluted to 250cc. with salt sol.)	no morphia
16. Miss H., hemorrhoids, pruritus ani (local anesthesia)	6

On one patient having senile gangrene it seemed unwise to use Epsom salt hypodermically. Although we have been taught that this drug is not absorbed from the intestinal mucosa, I had an ounce of it dissolved in four ounces of warm water and injected into the rectum. Morphia was given in the usual manner. It seemed to me that the very small amount of ether required to anesthetize this patient could be explained only by presuming that absorption did take place from the rectum. No post-operative morphia was given this patient. The experiment was repeated in several cases.

1. M. F. appendix abscess. MgSO4 oz. per rectum	2¼
2. O. M. total hysterectomy, appendectomy, p. i. d. (art. resp.)	11
3. T. O. C. perineal repair, ligat, varicose veins, suspension, appendectomy	3
4. Mrs. McA. total hysterectomy ..	6
5. Mrs. G. subtotal hysterectomy, appendectomy	14
6. D. C. bullet from l. femur	11
7. H. W. amputation of left foot	no morphia
8. Mrs. B. removal of rt. ovary and appendix	10
9. F. M. acute appendix (MgSO4 given 30 min. before op.)	1
10. G. W. hysterectomy, appendectomy	10½

11. Mrs. P. total hysterectomy, ap-
pendectomy—quit breathing,
cyanotic. ----- 21
12. W. R., tuberc, glands of neck,
-----no morphia.

There is no ideal anesthetic, but any method that lessens the amount of anesthetic necessary should be welcomed. The ill effect of Epsom salt so used is an inhibition of the respiratory center. This, if it does occur, can be overcome by the intravenous injection of a calcium salt. Meltzer used the chloride, the acetate, and the nitrate. Calcium completely reverses the inhibitory effects of the magnesium salt. If required, the calcium should be given immediately. Curtis reported a death following synergistic analgesia, occurring 60 hours after the operation. This does not appear to be a respiratory inhibition. It is the only death I have seen reported. One of my patients having a large thyroid, while undergoing an operation for pelvic inflammation, stopped breathing and became cyanosed. She responded at once to artificial respiration, and the operation was completed without further mishap. I think this patient received too much magnesium sulphate. Another patient ceased breathing for a moment while on the table. Her color remained good, however, and she went through the operation in good condition. The first morphia was given 13 hours after operation. Neither of these patients was given calcium.

From this short experience with synergistic analgesia, I am encouraged to make further use of it. It seems that it might be used with benefit in local anesthesia, in nose and throat work, in obstetrical practice, and in urological procedures. If Epsom salt relaxes the sphincter of Oddi, why should it not relax the ureteral orifice when applied locally? And when used hypodermically with morphia, it seems easily possible also to relieve pain resulting from manipulations in the urinary tract.

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DYSPEPSIA A COMMON SYMPTOM SYNDROME: DIFFERENTIATION FROM IMPORTANT SURGICAL CONDITIONS OF THE ABDOMEN

By William M. Sheridan, M. D., Spartanburg, S. C.

Dyspepsia is a symptom syndrome and not a disease. It is a term used to indicate a more or less ill-defined group of symptoms consisting of abdominal pain, discomfort or distress, flatulence, nausea and vomiting. Dyspepsia is often present when there is nothing wrong with the stomach. Gastric symptoms do not necessarily indicate that the stomach is diseased. The stomach more frequently gives rise to symptoms when it is not diseased than any other organ. It is the mouth-piece of the abdominal cavity (Deaver.)

However, organic disease of the stomach may and does occur and is usually evidenced by dyspeptic symptoms. Organic diseases of the gall bladder, pancreas, appendix and intestines are also likely to produce dyspeptic symptoms. Therefore, it is very important that every patient presenting dyspeptic symptoms should be studied carefully to determine whether or not an organic lesion is present. Dyspepsia should not be diagnosed as functional until the history, physical examination and laboratory studies fail to indicate the presence of an organic intra-abdominal lesion. All doubtful cases should have bismuth meal and X-ray or fluoroscopic study as well as fractional gastric analysis. The gastric content and feces should be tested for occult blood. For one or two days before testing for occult blood in the feces, the patient should be given no meat, fish,

sausage, or animal matter. The important surgical conditions of the abdomen which give rise to dyspeptic symptoms are gastric and duodenal ulcer, cancer of the stomach, perigastric adhesions, cholelithiasis, cholecystitis, chronic pancreatitis, chronic intestinal obstruction and chronic appendicitis.

Gastric Ulcers. Acute gastric ulcer is most frequently found in anemic young women. Chronic gastric ulcer is most frequently found in men between thirty and forty. The characteristic symptom of gastric ulcer is pain which comes on after eating and is relieved by vomiting. Pain is often severe and is due to the taking of food. It is relieved when the patient takes alkalies or vomits. Pain usually comes on within a few minutes after eating in ulcer of the cardia, and within twenty to forty minutes in ulcer of the pylorus. The pain is felt in the epigastrium and radiates to the back near the eighth thoracic spine. In ulcer of the cardia the pain may radiate to the left side of the abdomen and chest and in the ulcer of the pylorus the pain may radiate to the right side of the abdomen and chest. When the stomach is empty there may be a constant burning pain.

Vomiting may be brought on by the patient to obtain relief from the pain. Vomiting is apt to be spontaneous when there is any blocking of the pylorus. In practically all cases there is visible or occult blood in the vomitus or feces. In over one-half the cases there is severe hematemesis or melena, bleeding is frequent from acute ulcers and erosions of Dieulafoy. Flatulence and constipation are nearly always present. Patients with gastric ulcer usually lose 20 pounds in weight by the time the symptoms are finally established. Ulcers of the pylorus may, and ulcers of the anterior wall always, show epigastric tenderness and rigidity. There may be tenderness in the back in the region of the eighth thoracic vertebra. In a very few cases a mass may be felt and may be mistaken for cancer of the stomach.

Duodenal ulcer occurs most frequently in young and middle aged males. Symptoms more frequently occur in fall and winter than in spring and summer. Patients with duodenal ulcer often show long periods of remission from symptoms, during which time they feel perfectly well and are able to eat any kind of food without discomfort. Sooner or later, however, the entire train of dyspeptic symptoms return and the patient is again sick for a varying length of time.

The pain of duodenal ulcer is usually less severe than that of gastric ulcer. It comes on two to six hours after eating and is often relieved by taking food or alkalies. The pain is felt near the umbilicus and radiates to the right. Vomiting is not as frequent as it is in gastric ulcer, occurring in about 25 per cent of cases. Hemorrhage occurs in about 40 per cent of cases of duodenal ulcer, the blood usually being passed by the bowel, but some of it may be vomited. Occult blood is probably present in the feces of all cases. Sometimes severe hemorrhages occurs and is apt to be fatal. The blood is usually not passed by the rectum until sometime after the occurrence of the hemorrhage. In duodenal ulcer there is tenderness and rigidity in the right upper abdominal quadrant, average loss of weight is not as great as in gastric ulcer. There is usually hyperacidity of the gastric juice. The ulcer can nearly always be found with the X-ray or fluoroscope. Carman finds them in 96 per cent of cases.

Gastric cancer occurs more frequently in men than in women. The early symptoms are those of chronic indigestion. The patient soon sees that he is losing weight and strength more rapidly than is usual in dyspepsia. Irregular vomiting usually occurs and in some cases the symptoms of pyloric obstruction develop. The scirrhus type is very apt to cause symptoms of pyloric obstruction. The medullary and columnar cell types usually ulcerate and bleed. Very free hemorrhage may occur. In a major-

ity of cases macroscopic blood can be detected in the vomitus or feces. In some cases typical "coffee ground" vomiting occurs and when it does, it is a definite sign of advanced carcinoma. In practically all cases occult blood can be detected in the gastric content or stools.

There is pain which is aggravated by taking food. In cancer of the cardia pain comes on very soon after eating and in cancer of the pylorus about an hour after eating. Cancer of the body of the stomach may produce no pain. The pain differs from that of gastric ulcer in that it is persistent. The persistent dragging pain is one of the most important symptoms of carcinoma of the stomach. In case the pylorus or anterior wall or greater curvature is involved, there is tenderness on pressure and a mass may be felt. Most cases of cancer of the stomach with palpable tumor have already advanced too far to be cured by radical operation. In a majority of cases the stomach contents show absence of free hydrochloric acid and presence of lactic acid. However, about 50 per cent of cases of cancer of the stomach arise from gastric ulcer and in these cases there may be hyperacidity, especially if seen early. In advanced ulcerative cases fragments of the growth may be detected in the vomitus. It is very important to investigate all cases of chronic indigestion thoroughly in order to determine whether or not there is an early carcinoma of the stomach. This is especially true if the patient is over forty years of age. If this is done routinely many cases of cancer of the stomach will be detected early and perhaps cured by radical operation.

Perigastric adhesions usually occur in patients who give a history of gastric or duodenal ulcer or gall bladder disease. The symptoms may be due to obstruction at the pylorus or to dragging upon the adhesions by peristaltic movements of the stomach or intestines. In some cases the patient learns to place himself in such a position after eating that the adhesions are

relaxed. However, when he does not assume this position after meals, he usually suffers from a great deal of pain. The pain may be paroxysmal and recur after eating for years and yet there may be no loss of weight and no tenderness.

Gallstones may be present in the gallbladder for years and give rise to symptoms without the occurrence of attacks of biliary colic. These symptoms are most frequently present in fat, lazy women past forty, who have borne children. There may be headache, anorexia, acid indigestion, flatulence, a feeling of discomfort in the epigastrium or right hypochondrium and constipation. In severe cases there may be slight yellowishness of the conjunctiva and skin, itching, enlargement of the liver, clay-colored feces and presence of bile in the urine. There is tenderness over the region of the gallbladder. These cases are often thought to be cases of dyspepsia and gallstones are often not recognized until an attack of colic or cholecystitis occurs. Stones in the gallbladder can be detected with the X-ray in about 50 per cent of cases.

Chronic Cholecystitis shows an elevation of pulse and temperature during an acute exacerbation. Sometimes there is jaundice and leucocytosis. In case there is supuration there are apt to be chills, fever and sweating. A pear-shaped mass may be palpated which moves with respiration (unless there are adhesions to the abdominal wall) due to obstruction of the cystic duct by a small stone or plug of mucus. There is pain, tenderness and rigidity in the gallbladder region.

Chronic Pancreatitis is most apt to occur in stout persons with gallstones and cholecystitis. Eighty-one per cent of the cases of chronic pancreatitis operated upon at the Mayo Clinic had gallstones.

The symptoms may be sudden or gradual in onset. In case the symptoms come on suddenly, there will be nausea and vomiting and severe pain in the epigastrium radiating to the left side and posteriorly

to the back. The upper abdomen is tender and rigid. Jaundice quickly occurs and a diagnosis of biliary colic is often made. However in biliary colic there is pain, tenderness and rigidity over the gallbladder and the pain radiates to the right shoulder blade and right side of the chest.

In case the symptoms are chronic in onset, there will be rapid loss of weight, flatulence and painful indigestion. There is severe epigastric pain which is apt to radiate to the left. These symptoms are made worse by eating. There is tenderness and rigidity in the epigastrium. The gallbladder soon becomes enlarged and the patient becomes jaundiced. A hard mass may be felt behind the stomach. The stools show free fat, undigested carbohydrates and partly digested muscle fibers. The urine may contain sugar and fat. Very similar symptoms are produced by cancer of the head of the pancreas.

Chronic Intestinal Obstruction causes gradually increasing constipation and abdominal uneasiness, and the patient is apt to think that he has indigestion. In some cases constipation and diarrhoea alternate. At irregular intervals obstinate constipation, colicky pains, distention of the abdomen, vomiting and visible, palpable and audible peristaltic movements of the intestines occur. In some cases a tumor may be palpable. Finally, acute and complete obstruction ensues, unless the condition be recognized, and the cause be moved by mechanical interference.

Obstruction from acquired diverticulæ most frequently occurs in the aged and the sigmoid is the most frequent seat of the obstruction. There is pain, tenderness, rigidity and a mass in the lower left abdominal quadrant, associated with constipation.

Chronic appendicitis often produces such typical dyspeptic symptoms that the appendix is not thought of. They are usually nausea, flatulence, epigastric and abdominal distress, gaseous distention of the ascending colon and tenderness one and one-

half inches to the right and a little below the umbilicus. In some cases there are prolonged attacks of epigastric pain. The pain may radiate toward McBurney's point and be aggravated by taking of food. In case there is a history of the patient having had one or more attacks of acute appendicitis, the diagnosis is easier. Negative X-ray findings of the stomach and duodenum and absence of tenderness over the gallbladder, suggest that the appendix alone is involved and confirm the diagnosis.

AN EXPERIENCE WITH RADIUM

By T. H. Dreher, M. D., St. Matthews, S. C.

I know nothing about the technical application of radium. As the untutored Methodist exhorter of a back district in Georgia once said:—"I cannot preach from the text but I can tell my experience in spite of the devil." Not only laymen, but the rank and file of the medical profession, have been kept, largely, in the dark about the dangers of this, more or less, new and experimental remedy for treating diseases. As one caught, indirectly, between the upper and nether millstones, I propose, as briefly as I can, to paint the other side of the picture. With true Cromwellian sincerity, I will not palliate nor eliminate the warts. I am sorry for your sake, as well as my own, that the victim was my own wife, for that will naturally prejudice your estimate of my judicial state of mind. As expiation, in part, of this handicap I refer you to Drs. J. H. Taylor and J. J. Watson, of Columbia, Robert Taft, X-ray specialist and radiologist of Charleston, H. C. Raysor, faithful attending physician, L. B. Bates, J. K. Fairey and T. H. Symmes of St. Matthews.

On, or about, April 1st-1921 we consulted Dr. Taylor about a slight and suspiciously intermittent vaginal discharge.

Read before the South Carolina Medical Association, April 19, 1922, Rock Hill, S. C.

He found a small, smooth nodule-partridge-egg in size—in the recto-vaginal septum and correctly supposed the flow, intra-uterine. He suggested two radium treatments and later, if necessary, a complete hysterectomy. That sounded orthodox, but I wished the radium used at the Howard Kelley Sanitarium, Baltimore—boasted and plumed for its achievements in this field. We lost no time in getting there; not much in getting back; and still less in our journey to the brink of the grave, but I am too fast. They reversed the programme by first curetting the womb and excising the nodule, April 9th-1921. The latter was pronounced an adeno-myoma and the microscope gave a clean bill of innocence to everything. Radium was then urged to bring on the menopause, as they said, though she was 49. They spoke lightly of any untoward consequences and her menstrual function had always been painful and unsatisfactory.

Dr. Rex Duncan, radiologist of Los Angeles, says that primary curettage is not beneficial and often aggravates. Drs. Clark and Keene of Philadelphia, in same issue of *The Journal of the American Medical Association*, August 20, 1921, in No. 8 of their conclusions, said that irradiation is dangerous immediately before, or soon after an operation." At any rate, a nurse with no personal, doctorial supervision, applied it externally over the left ovary April 17th—eight days after the operation, and kept it on five hours. Vomiting was severe all night, and next morning a dark circular discoloration about the size of a silver half dollar, was noticed over the radium area. It was also applied over the uterus and right ovary, by a new nurse and without the accompanying pigmentation. After 48 hours, as I remember, purging set in which was only partially relieved by treatment. The patient was very blue over the outlook and wished to get home. The truth is neither of us was charmed with the yankee chilliness of the atmosphere. But we were "Innocents Abroad", so I asked the proper officials three times about the

advisability of her leaving, but they answered neither yea nor nay. I thought then, and still think, that they wanted us to go, but didn't care to assume the responsibility. It would be an insult to their professional standing to say that they were ignorant of her impending doom.

Saturday morning, April 23, I called for my bill and announced that we would leave at 5 p. m. No one dissuaded, and when the hobbling and halting patient was assisted to a waiting taxi the old nurse, closest to the case, was the only one in evidence to wave a sympathetic adieu. These were the first real shadows of coming events.

The trip home was a nightmare, and she rapidly grew worse. Two trained nurses from Columbia were summoned. To the faithful vigils, night and day, of these nurses—Misses Garrett and Cromer—the patient, largely attributed her physical salvation. The temperature hovered between 101 and 103.6 for three weeks. Vomiting increased, the menses came in floods, a form of dysentery with bloodcasts of the intestines complicated, the pelvic organs were rigid and infiltrated, while the evil genius of that discoloration ploughed on its devilish course. Hypodermis of morphia were our main reliance. Finally, the blister developed into a ghastly, suppurating ulcer, five and four fifths inches in diameter, with a violent neuritis of the whole left leg and thigh.

The first normal temperature came, according to the charts, June 5th and was then intermittent till Aug 24th. Nature made a desperate effort to close in her lines and finally chalked off two inches from the diameter of the ulcer. She then ceased operations and never again budged a peg except immediately under the new roofing of the skin flaps, later on.

The case dragged on its weary way for weeks, with sleepless nights, a swollen leg, neuritis, a heavy morning vomit, a suppurating ulcer, and prayers that she might be called to her last sleep; while I was

handing out expletives not always in harmony with the third commandment. I longed for some "Balm in Gilead" to obliterate the accursed thing, and set upon skin grafting as our only hope. In this I got little encouragement. It did savor of a fool's errand to hunt anything that would take root and grow in that forbidding soil of suppuration, criminally careless mutilation, and charred remains. I wrote a leading surgeon of John Hopkins and he Job-comforted by promising to turn her promptly over to Kelley's should I send her to him. I then had Dr. Taylor write another of the same institution, and more nationally known, and he recommended a colleague—then an inmate of a Colorado Sanitarium.

Finally, I wrote full details to Dr. J. Shelton Horsley of Richmond, Va., and he invited us to come. In 48 hours I had her and her faithful nurse, Miss Garrett, on the way. Sept. 6th—thirty hours after our arrival she was on the operating table. The old radium burn was completely excised and, just above, a pear shaped flap was outlined and all packed with iodoform gauze. In a few days fever set in and rapidly rose to 103. For a week she was totally delirious. A nerve specialist was called and he pronounced it "Radium Toxemia." The collapse delayed matters and the first flap was not placed till Oct. 4th. A second flap was outlined on the upper part of the thigh and drawn up Nov. 21st. This left a small triangular space on the left corner of the old burn which was covered Dec. 12th by a small flap from the outer portion of the hip. For the first and second flaps there were minor and intermediate dissections with a view of increasing the vascularity of the pedicle. No ether was used after the first operation. The work was necessarily slow, tedious and discouraging. But the plan was intensely interesting to me and the execution brilliant.

Even after the old radium burn was excised there was unmistakable evidence of the dark aftermath, and as I have said, the flaps put no new life into the area beyond

their margins. The nerve could be plainly seen, like a thread, running across the base of the old burn and the neuritis persisted till the last flap was placed. Fortunately, it has never returned. Theirsch grafts from the thigh were used over the fresh raw surfaces.

It was a terrible ordeal and she dropped in weight to 69 pounds. The marked kindness and attention shown her—from the boss surgeon to the orderlies—will always be remembered with profound appreciation.

We left Richmond, Feb. 7th—just five months after our arrival. Given up twice, to die, battle-scarred, pale and frail, she was still above the daisies and anxious to return home for a final effort at getting back to "normalcy." At this stage of the game—April 1922—the wounds are about all healed, her appetite good and her weight 106—just nine pounds below normal. Some lameness still exists and there is a rather obstinate swelling of the left lower limb.

Whether these defects will ever be entirely eliminated is problematical.

If you ask me how this poor, innocent woman was maimed, mangled and butchered, as she was, I confess my inability to answer. When we went to Baltimore she was looking and feeling better than in twenty years. I was seeking information and the prevention of possible future trouble. They said there was no cancer and the Richmond findings bore this out. That being the case, it seems now a grave responsibility that they assumed. But, sob stuff will be of little interest to you and I hasten to conclude.

I make no apologies for bringing these unfavorable facts to your attention and putting up a "Stop, Look and Listen" signal for your consideration. You will then, at least, not go in with the ignorance and utter sang froid, as I did, and consider it a sort of honor to be initiated into the mysteries of the new fad.

Since then I have read every scrap of

radium information, available. I have looked for those marvelous cures and for similar radium accidents. The results of these investigations from me amounts to little or nothing to you, but you cannot brush aside and ignore so great and noted a surgeon as Dr. John B. Deaver of Philadelphia. Before The American College Of Surgeons in his home city last year he said: "Radium has failed utterly in the treatment of cancer." He further added that its benefits had been virtually negligible and that, in many cases, it does more harm than good.

I would rather take my chances with the caustic paste of the quacks than with this newest and most dangerous novelty ever propagandered by the medical and surgical world. The tantalizing meanness and deviltry of the suffering from such a radium burn is in a class strictly to itself. Ninety and nine of you may touch up your little furuncles, erosions, epitheliomas, and even cancers, and get by. If you are the unlucky one hundredth, God pity you above all the sinners that ever locked horns with his Santanic Majesty.

Discussion:

Dr. J. H. Taylor, Columbia:

Dr. Dreher has indeed brought a tremendous charge, in this individual case, against radium. Even those of you who do not know Dr. Dreher as I do, and are not as fond of him as I am, must have your sympathy very deeply stirred by this pathetic story that he has given us.

Radium, like all tremendously new things, is subject to two very grave defects. One is that it is in the experimental stage, when people do not know exactly how to handle it. It was the same in the case of X-ray. There is an experimental stage in the acquisition of knowledge, which comes first, and later comes conscious possession of knowledge. We aspire now to conscious knowledge of radium, and in that stage carelessness comes into play, and we must make allowance for that. Mrs. Dreher was doubtless the victim of carelessness on the part of the nurse, for I can hardly think that it was carelessness on the part of the doctor. Those burns will occur and the healing is very slow, because the emanations

that go out cause thrombosis over the area of the burn, and that occasions a very slow and difficult healing of the parts.

I saw Mrs. Dreher. She had a nodule just behind the cervix, and we told her that at her age (forty-nine) and with her history, a hysterectomy was advisable, but that first radium should be used. I think that Dr. Dreher chose the best place to take her, and I can not subscribe to all that he has said against radium. Radium must be intelligently used, and, above all things, not carelessly used. It will help us surgically to give our cases of cancer of the cervix a very much better chance for apparent recovery. A cure we can hardly get in that type of case.

Dr. L. A. Hartzog, Olar:

I feel it my duty to give you a little experience that I have had. I do not speak through a motive to criticise. Dr. Burnam I have found to be a most excellent gentleman in mind and heart, who has a tendency and a desire to do what he thinks to be best. The victim was also a member of my family, my wife's uncle, who called to my attention a small sore just under his tongue which was just slightly worrying him. The diagnosis of cancer having been made, and the folks of Bamberg feeling that there is no place like Baltimore for cures and recoveries, it was his desire, as he expressed it, to "go to headquarters", and he asked me to accompany him. Our good friend, Dr. Burnam, made the examination and a hasty diagnosis. He recommended that the patient be brought to his office the next day and radium applied for thirty minutes, and on the succeeding day he would remove that part of the tongue. He said that if, after a careful examination, the glands were found not to be involved, the patient would be able to go home in a few weeks, cured. The treatment that he recommended was carried out, the patient suffering agony. That part of the tongue was taken off with a wire cautery. The third day the patient complained of feeling a little lump on his neck. The distinguished gentleman who cured him said that that had no bearing on the malignant trouble, and sent him home. The lump grew until it became the size of my fist, and in the meantime he kept going back and forth to Baltimore and they continued the radium treatment. After a year of radium treatment, Dr. Burnam removed the gland. The sore suppurated and enlarged and enlarged, and he finally came

home. He lived two weeks after his return home, and before he died his neck and face from ear to ear were a cancerous mass. He was the third case they had sent home to Bamberg to die, and my advice to you is to leave radium alone.

Dr. F. H. McLeod, Florence:

I do not know that I can make much of a defense for radium, or that radium really needs it. These are certainly two very unfortunate cases.

Radium is a very powerful escharotic, and capable of doing a great deal of harm when not properly used. Radium will not cure all cases of cancer. Most of the cases treated with radium are incurable, and can not be cured by surgery, so they are then sent for radium treatment. In some of the cases which I have sent to Dr. Burnam and Dr. Kelly I have been disappointed, and in others the results were wonderfully pleasing. Cases which were formerly treated with the Percy cautery have been treated with radium and have been greatly improved. I am sure that Dr. Burnam and Dr. Kelly are as honest as any two men can be, and if they have had bad results it is not because they have not used radium as they best knew how. They have taught the rest of us how to use it. I am sure that radium has had a lot of advertising that it does not merit, and that we expect too much from it.

I was in Philadelphia when Dr. Deaver made his speech. The next day Dr. Pancoast had a clinic at which he presented several inoperable cases sent to him by Dr. Deaver, which he had cured by radium.

Dr. Samuel Orr Black, Spartanburg:

Of course we are all interested and we all feel with Dr. Dreher in the very unsuccessful and unfortunate results in the member of his family. The question in this case is whether a considerably larger amount of radium was not used than was meant to be used. Another question that comes up is how much screening and what screening was used, and how far the radium was placed from the abdominal wall. It might be that the full explanation in this case is that a considerably larger amount was used than originally intended.

As to what Dr. Deaver had to say about the action of radium, we may remember that he had a good deal to say about the value of X-ray findings in diseased conditions of the stomach and duodenum, and about the value

of laboratory findings. Dr. Deaver is one of the greatest surgeons of the country, in my opinion, but just a day or two after he made the speech referred to he was called by Dr. Charles H. Mayo, and by Sir Burton McKenzie and some other foreigners.

The etiology of cancer is not known to us. Cancer of the tongue is regarded as incurable. Certain death is almost inevitable, some of the reasons being the great likelihood of infection and the inability to secure rest.

In cancer of the cervix, radium is the treatment par excellence. It is better than surgery, because it eliminates the danger of pneumonia, of post-operative peritonitis, of post-operative insanity, if you wish to go that far. It seems to me that radium is the very best agent in these cases. Radium, of course, will not cure a case that is far gone, but, if the woman live long enough and you give enough radium, the chances are that it will dry up the sloughing and remove the odor, and she can die a comfortable death.

Dr. Thomas S. Cullen, Johns Hopkins Medical School, Baltimore:

Dr. Dreher has my sincerest sympathy in his anxious and trying experience, but I could relate to him even more distressing conditions that have followed the use of radium.

Radium, like sunshine, affects various people differently. You and I may go bathing in nature's costume. As a result you may be simply tanned while I am blistered and rendered most uncomfortable for days. The same variations are experienced with the use of radium.

If I send one hundred inoperable cases of cancer of the cervix to the radium expert and he relieves say ten per cent, that should not be considered ninety per cent failure, but salvage in ten per cent where the surgeon could do nothing.

I hardly think Dr. Dreher's remark as to the use of untrained nurses is fair. The nurses that give radium are given a definite amount of radium emanations for the given case, are told how to apply it, and also have explicit directions as to how long it is to be used. In other words, they carry out instructions, just as they would in a medical or surgical case. Every nurse must be relieved of this duty in a few months, as otherwise she would be sterilized by the constant exposure to the radium emanations.

We all know what wonderful results radium gives in skin cancers, and especially

in cancer at the inner canthus of the eye, where the knife is of little value. We are also familiar with what can be accomplished in sarcoma, and the temporary and in some cases apparently permanent relief in carcinoma of the cervix.

We of the Gynecological Department of the Johns Hopkins Hospital are under lasting obligations to Dr. Howard A. Kelly and Dr. Curtis F. Burnam for the free treatment of the indigent cancer patients coming to our dispensary and ward.

Radium has an even increasing sphere of usefulness. It undoubtedly has its drawbacks, but when we view the subject from every angle it has been a Godsend to the surgeon, notwithstanding the occasional unfortunate experience as related to us by Dr. Dreher.

Dr. Floyd D. Rodgers, Columbia:

I want to add my feeble voice to the discussion, in favor of radium. In the early history of surgery, if we had all stopped when we had a few failures, we would not have the brilliant results of today. Again, it is utterly impossible to look at a skin and know how much radium it will take. In the early days of X-ray we had a great many severe burns that we do not have today, but sometimes even today an operator will forget to put in a filter. If you have heavy penetration and use only one millimeter of filter when you should have used six, you will get an X-ray burn.

The best known radiologist in the United States has been twenty-five years in the game, and he has had sixty-five operations on his hands and face on account of epithelioma. His little stubs of fingers are due to the injuries from X-ray. Suppose he had stopped at the first burn? We would have been in darkness yet.

Radium would be well worth while if only for the comfort it gives in inoperable cases of cancer of the cervix. You have all seen cases, I know, in which the odor from the discharge makes even the strong stomach of the physician begin to "shimmy." Radium can be applied probably twice, and after two weeks you can walk in and smell the flowers on the table by the bed. That actually happens in those cases.

We have no cure for cancer. Nobody has. The surgeon can often make the patient with cancer live out his life, and so can the X-ray man and the radium man. But as for a cure, it is yet to come. The successful removal of cancer depends entirely upon the stage in

which it is discovered and the therapeutic method used. The cautery will probably be displaced entirely by radium. In the struggle to put radium in its proper therapeutic place there are bound to be accidents, because of the fact that at times inexperienced persons have to apply it. This valuable agent should not be blamed for these accidents. The blame should rest where it belongs—on the operator.

Dr. W. W. Fennell, Rock Hill:

The Doctor said that cancer can not be cured, still he said that it can be cured. I believe that there are two things essential to a cure in cancer, early diagnosis and the prevention of autogenous growths. If a cancer is diagnosed early enough, before the glands are involved, it is curable. As for radium, I know very little about it. All the cases I have sent to Baltimore have died.

I have cured epithelioma of the face by the constant application of hot water. In all cases of epithelioma in which I use a cautery I skin graft.

I have been unfortunate in not being able to buy radium, but I prefer the Percy cautery.

Dr. Carl B. Epps, Sumter:

I think that radium is an excellent thing, but I think also that it is being much abused. There are ignorant agents going all around now selling so-called radioactive agents in little tubes, at so much per. I think that our Health Department ought to handle these and other fakes. One of my former patients, who was "eaten up" by the boll weevil last year, recently informed me that he was considering accepting an agency for selling radium. Guess he thought the boll weevil could not eat radium.

Dr. W. R. Wallace, Chester:

My experience with radium in carcinoma is very limited, but I have seen most happy results in the treatment of fibroid tumors with radium. I recall now a patient who had a very large fibroid, with bad discharge, and the surgeon backed off on account of her physical condition and the condition of the abdominal wall. After two trips to Baltimore for radium treatment she was very much relieved and the tumor was much reduced in size, and she is enthusiastic over the results of radium treatment. Certainly, in some of these cases, it gives marvelous results.

Dr. Dreher, closing the discussion:

There is just one point I want to make clear. From the tone of some of the remarks I judge that I left an impression about Dr. Durnam that I would not wish to stand. My position with reference to Dr. Burnam is this: He knew what that discoloration meant, and what he should have done—and that is all that I contend for—he should have said: "An accident has been perpetrated upon your wife, and it is your duty to stay here and let me fight it out to the end." Personally I believe that Dr. Burnam is a high-toned man, and I do not want to say a word against him

personally, but my contention is that he should have told me the actual condition of things and stood by his own mistake. Not a man here but will agree that there was a blunder in the application of the radium, unless he means to say that they do not know the results of radium treatment.

Dr. McLeod:

May I say just a word in answer to Dr. Dreher? I want to say that Dr. Burnam had no reason to expect a burn to show up so early. Radium burns and X-ray burns do not show up so soon, as a rule, and it was an unusual occurrence for it to appear so early.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
Medical College of the State of South Carolina,
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ACUTE PERITONITIS

Peritonitis is a very common affection and may be diffuse or localized, acute or chronic. Of the various types, acute diffuse peritonitis is, by far, the most common and the most important.

Acute peritonitis probably always results from bacteria or bacterial products. It may be produced in animals by experimental injections of certain chemicals but it probably never occurs spontaneously in man except in cases of direct bacterial infection.

Access of bacteria to the peritoneum is gained by the blood stream, by migration from the Fallopian tubes, by invasion through the walls of the viscera, or by perforation of the viscera or external abdominal walls. Probably, bacteria are frequently set free in the peritoneal cavity in the course of infections, but the peritoneum seems to have a high degree of resistance, and is, apparently, possessed of special means of defense. Idiopathic peritonitis is a term once used by authors to designate certain unexplainable cases, or seemingly causeless peritonitis. At present, these are probably unusual instances of primary hematogenic peritonitis or, more commonly, cas-

es, of secondary peritonitis following abdominal infections which have not been discovered.

Peritonitis from direct extension of infective processes is common. Some irritation of the serous covering (the peritoneum) of the abdominal organs occurs in most of the diseases of these organs. In cases of ulcers of the intestines, or strangulation with secondary death of tissue, considerable reaction, local or general may occur without perforation. In these cases the bacteria penetrate the walls of the intestines along the lymphatics and thus reach the serous coverings. Similar extensions of infective processes are often noted in diseases of the tubes and ovaries and uterus.

Perforative peritonitis may result from perforation of gastric cancer or ulcers, from traumatic or ulcerative perforations of other parts of the intestines, from perforation of the appendix, or from rupture of diseased Fallopian tubes; less commonly from rupture of infective foci, as abscesses of liver, spleen, pancreas or other structures, or penetration of the peritoneal cavity by stab and gun-shot wounds.

Acute localized peritonitis results in cases

in which bacteria escape slowly and in small numbers through the walls of the viscera, or, in instances of perforation, when the exudate has formed a wall sufficient to limit the spread of the infective material. The peritoneum in the area at first becomes intensely congested and the normal lustre of the endothelial lining of the peritoneum disappears in consequence of the beginning exudation. The exudate increases and is usually serous in character at first, then fibrinous, and in the later stages often fibrino-purulent, indeed abscesses may, and frequently do, represent the last stage of the acute process. In such cases if the patient survives, the exudate may burrow to the exterior and discharge, it may discharge into the intestine, or it may, by gradual inspissation, leave a dry, cheesy mass which occasionally becomes calcareous.

Acute general peritonitis—may be the direct result of the discharge of rather large quantities of infective material from a perforated intestine or organ; or it may secondarily result from a localized area, the limiting wall of which is not sufficient to prevent general spread. In these cases, the peritoneal covering of the intestines, and to

a certain extent, the parietal peritoneum, becomes congested and lustreless, as in the localized form. Serous exudation takes place and is usually rather small in quantity, and soon the intestines are covered with flakes or thin coats of fibrin and are matted together. Later the exudate assumes a yellowish color from the emigration of leucocytes and pus cells.

In the most severe forms of peritonitis, the exudate may quickly assume a putrid character, and the deposit on the serosa covering, as well as the serosa itself, may undergo necrosis. In these cases, the peritoneal cavity contains a foul smelling, brownish, greyish, or blood tinged liquid exudate, and the affected peritoneum is covered with brownish or faint greenish deposits.

Peritonitis has an early and profound effect on the intestines, and reflexly or in other ways on the general organism. In the early stages the peristalsis of the intestine is stopped by spasmodic contraction. Soon the musculature becomes paralyzed and obstinate constipation and extreme dilatation occurs. The systemic effects are strikingly evidenced by the severe shock of the early stages.

PUBLIC HEALTH

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THE PASSING OF THE OLD OAKEN BUCKET

Man is controlled largely by habits and customs.

Just because our forbears contented themselves with digging a hole in the ground in order to obtain their water supply, the average person who lives on the farm, is satisfied to follow the practice of his progenitors and dig his open well, regardless of the dangers attending the use of such a water supply.

The old oaken bucket has a distinct place among our fond recollections, but it seems necessary now, in the light of cold science, to revise our sentiments regarding this object of antiquity, and to realize that there are lots more practical and much more sanitary methods of obtaining our water supply than with the use of the old oaken bucket and the open well.

Sanitary surveys of rural districts made by various Health Agencies have demonstrated the fact that the majority of isolated homes use open wells as their source of water supply, and that practically all of such wells are more or less contaminated with Colon Bacilli, and a number of them are directly responsible for the spread of Typhoid Fever and other intestinal diseases.

Considering the question of a water supply from a strictly practical standpoint, it is just as easy and just as cheap to drive a pipe down into the ground until water is secured, as it is to dig an open well; and it is only custom that allows anyone to do otherwise.

Except in hard clay, and impervious soils, the principal source of pollution of a water

supply is from the surface; and even a comparatively shallow driven well, if properly protected at the ground level, is much safer than an open well, no matter how deep.

The large number of cases of Typhoid Fever, Dysenteries and Diarrheas occurring in South Carolina each year is a sad commentary of the fact that the open well is entirely too popular in this state; and the few surveys that have been made in the rural districts of South Carolina, have shown that what the average farmer is content to consider a good water supply is nothing more than a dangerous dilution of offensive sewage.

With the organization of a community, the question of a water supply becomes the paramount problem, and every modern city has its municipally controlled public water supply.

The isolated rural home, however, must arrange for its own individual water supply, and this the average person does without giving much thought to the question of sanitation or safety.

Thus, while the morbidity and mortality rates of the water borne diseases have been steadily declining in the Cities; the rates in the rural districts have remained practically the same for many years. Public attention should be centered therefore upon the water supply of the isolated home.

Living conditions on the farm are rapidly changing, thank to the Flivver, the Delco system and the Radio; and a great many of our ancient institutions are passing away as a result of modern progress.

The passing of the old oaken bucket however, will not be missed.

NERVOUS AND MENTAL DISEASES

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STERILIZATION VERSUS PROPAGATION.

It is estimated that sixty per cent of the inmates of the State Training School are the offspring of feeble-minded parents. A frequent visitor at the school is a feeble-minded woman who is the mother of seven illegitimate children, four of them inmates of this Institution and two others inmates of other public institutions. This is the natural outcome of leaving feeble-minded persons free to propagate. Another inmate is the mother of eight illegitimate children.

Some states have passed laws permitting or requiring the sterilization of feeble-minded, criminal, or insane persons who come under state control. Many careless observers and some careful students of the subject believe that this method, if it were generally accepted and rigorously applied, would solve the problem of checking the increase of dependent citizens. Many physicians oppose the plan, some on the ground that we have no moral right thus to destroy potential human life, yet many of them advocate segregation of these individuals during reproductive age, which is the same in effect. Because of the reluctance of physicians and state officials to assume the responsibility of the work, the laws in some states are found to be dead letter. The other common objections to the practice of the method are that it is not complete in its results, that is, it does not reach the "potential carriers"—those not themselves affected but who may reproduce one or more defectives in a family, and that it would be conducive to licentiousness and to the spread of venereal disease. It may well be that responsible couples are frequently deterred from illicit relations by the fear of

having illegitimate offspring, and that among normal persons this fear is a potent aid to self-control. But this does not hold well for feeble-minded persons who are frankly acknowledged to be morally irresponsible. It is characteristic of such persons to act upon the impulse of the moment, with no thought of possible consequences. Our observation of the inmates of this school leads us to doubt whether these "children" have the capacity to restrain themselves in the least because of the fear of consequences.

Those who oppose sterilization on theoretical grounds claim that they hold the highest ethical position. The protection of the weak, they say, is the noblest product of christian civilization; it is needful for the highest moral development of the race that we should have helpless persons in our midst; the object of medical science is to preserve human life, and we can not permit ourselves to interfere with the procreation even of the obviously unfit without losing some of our sense of the sacredness of life. This point of view is very attractive, and there is some force in the argument. All the facts must be faced however, whether we like them or not. It is generally recognized among students of anthropology and sociology that we have carried our care, or lack of care of incompetents so far as to endanger the continuous progress of our civilization. In states where laws provide special classes for defectives in all schools, large sums are being expended annually for the purpose, and sometimes with the result that many normal children are cut short in their school training because of lack of funds for education.

Institutional care is certainly the proper method of caring for a large number already

here, and sporadic cases that are bound to occur in the future. But there is no state which makes adequate provision for more than half of its feeble-minded population, and the cost of establishing and maintaining institutions to accommodate all persons whose propagation would be a menace to society is obviously prohibitive.

Institutional care of the feeble-minded is the generally accepted means of avoiding the disastrous behavior of many of the cases resulting in crime and propagation. Some of the most violent opponents of sterilization, as a matter of general practice, are in favor of permanent custodial care.

This discussion will have to be settled by normal persons. It is difficult for us to believe that any normal person desires to become the father, mother, brother, sister, grandparent or even near relatives of a defective, and this does not mean that they should turn their backs on those already in

existence. With the simplicity of the operation now in use, few people would object to the removal of this danger among those who are obviously afflicted if they had a fair conception of the results of their being left free to propagate.

The chances should be favorable in quite a few cases to permit marriages of a defective couple properly mated if they were sterilized. A good many couples are capable of earning a living when both are employed and no children have to be taken care of. They are neither capable of taking care of the children physically or training them in the least especially as almost every one would be defective. It is to be hoped that our own state will not be as far behind in passing certain laws regulating the propagation of the mentally afflicted as it was in passing one to establish an institution to care for a few of the thousands already in our midst.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

METHODS OF TREATMENT OF URETERAL CALCULUS.

There are three courses to consider in the elimination of calculus from the ureter: 1. spontaneous expulsion; 2. endoureteral treatment through the catheterizing or operating cystoscope; 3. surgical removal. The last two procedures have their own definite indications and contra-indications. Therefore, the guiding tokens should be applied in every case of calculus of the ureter. It is of interest to note that experiments are now being made to dissolve the calculi by injecting through the ureteral catheter a weak solution of hydrochloric acid. There is not much assurance of success in this procedure.

From 40 per cent to 60 per cent of ure-

teral stones pass spontaneously; Braasch thinks that 75 per cent do. A sense of security should not be entertained because the symptoms have disappeared. The disappearance of the pain and other symptoms that may accompany an attack of ureteral colic does not signify that the stone does not still remain in the ureter. If it is allowed to remain there, even in the absence of symptoms, serious damage, especially to the kidney, will ultimately follow.

Experience has shown that with cystoscopic aids, nature can be assisted with a resultant shortening of the period required for expulsion with a saving of much pain to the patient and lessening the chances of damage to the kidney from urinary retention and the chances for secondary infection. Buerger states. "It may be accepted as proven by

cystoscopic researches that certain transitory or even permanent lesions are wont to accompany the majority of attacks of so called ureteral colic. These are the purely mechanical results of obstruction of the conducting system with retention of excretion products in the pelvis of the kidney and ureter and consequent infection."

Buerger also states, "In every instance of positive calculus obstruction demonstrable either with the x-ray or with the cystoscope, cystoscopic treatment is in order, unless the stone is immediately passed within 24 to 72 hours." He announces the following dictum: "I would state that cystoscopic intervention is advisable in almost all cases of ureteral stone within a short period after the stone has found lodgment in the ureter in its descent from the kidney."

There are a certain number of ureteral calculi that will never pass spontaneously and these must at one time or another be removed by some sort of intervention.

The urgent demands for cystoscopic intervention are as follows: 1. frequent and severe attacks of renal colic; 2. evidence of a coexisting renal infection which is not of the fulminating type that would require nephrectomy; 3. an impacted calculus causing reflex anuria; 4. one that is causing uremia; 5. one that has produced a reflex ileus. These complications frequently respond readily to ureteral catheterization.

Ureteral catheterization in the presence of calculus often gives immediate relief from pain caused by the obstruction. It restores the kidney to its pre-existing function. When secondary infection is present, this infection can be treated through the ureteral catheter with such beneficial results that cannot be attained in any other way.

Other complications of ureteral calculi other than those already mentioned may be classified as Buerger has done as follows: "1. Marked hydronephrosis with secondary infection. 2. Infections of the non-hydronephrotic kidney. 3. Rupture of

the hydronephrosis or pyonephrosis. 4. Perinephritic abscess. 5. Dilatation of the ureter. 6. Sclerosis and stricture of the ureter. 7. Secondary stone formation in a dilated ureter or in ureter above stricture. 8. Periureteritis and periureteral abscess with or without ureteral perforation. "Each of these complications has its own indications for treatment. We should prevent complications by not allowing a stone to remain in the ureter.

In a general way, the cystoscopic manipulation is as follows: Dilatation of the ureter with the ureteral catheter and bougies; also with the Lewis' metallic dilator, if necessary; the injection of a 2 per cent novocain solution into the ureter for its relaxation; the injection around and beyond the stone of sterile olive oil or liquid petrolatum for lubrication. It takes one or more such treatments for success. There is no harm in many such treatments in competent hands. If stones recur, they may be handled in the same manner. Bugbee has succeeded in removing 326 out of 347 impacted ureteral stones by cystoscopic methods.

Surgery for the removal of ureteral calculi should always be avoided, if possible. We think that there is a tendency on the part of some urologists and general surgeons to practice it too often.

According to Cabot, ureteral stones recur in about 30 per cent of the cases. Braasch finds them bilateral in about 15 per cent of cases, while he thinks that they recur in less than 10 per cent of cases. He also finds renal stones multiple in 33 per cent. Cabot followed up 21 of the cases that he operated on for ureteral stone. He found 15 well, and that 6 had further trouble. He thinks the probability of recurrence about one in three. He states, "Of the cases (66) of stone in the kidney (following operation) 34 were well and 32 showed either a persistent infection or recurrent stone." He thinks kidney stone reforms in 49 per cent of cases. Of course a great many of the stones found in the ureter descend from the kidney.

The operative mortality ranges from one-

half of one per cent to 10 per cent or more. Judd, of the Mayo Clinic, reports 2 deaths in 400 ureterolithotomies performed there. But he also reports some recurrences, and in a course of time will have to report more of them. He had to perform 50 nephrectomies in these cases.

Fistulae not infrequently follow operation, finally necessitating nephrectomy.

There is practically no danger to numerous cystoscopic manipulations, while it must be admitted that there is always attendant a considerable risk in operation and a big chance for recurrence of the stone.

The common indications for the surgical removal of ureteral calculus are as follows: 1. Those cases of impaction when the calculus cannot be dislodged and removed by many cystoscopic attempts; 2. Where an impaction exists with uremia, anuria or ileus and which does not respond or cannot be overcome by ureteral catheterization; 3. In severe, acute infection of the kidney, such as pyonephrosis, necessitating nephrectomy. Usually, a complicating pyelitis or infected, slight hydronephrosis can well be controlled to the patient's advantage with the ureteral catheter. 4. When urological examination has shown that the kidney is functionless from tissue destruction and a nephrectomy should be performed; 5. In any anatomic

deformity that will not permit cystoscopy; 6. When the patient can not for one reason or another tolerate the cystoscope.

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SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

TRANSFUSION OF BLOOD

There are a number of conditions in which blood transfusion is definitely indicated and is of inestimable benefit to the patient.

A case in mind is a young woman aged 27 years, who had afibroid uterus. She was the mother of one child, and had had repeated uterine hemorrhages over a period of three weeks before she consulted a physician. These were the first abnormal uterine flows she had ever had.

The physician recognized the condition at once and referred her to the surgeon. Physical examinations revealed a well nourished, but a very anemic female. The visible mucous membranes were pale, there was present a cardiac hemic murmur, the pulse averaged 110 to 120 beats per minute, the temperature was 99, she fatigued easily, and the movements in bed incident to the examination almost used her up. The uterine fundus was approximately three times normal size, partly fixed, and there were none of the usual signs of pregnancy. The hemoglobin was 24, the red blood cells numbered 1,600,000, the white blood cells 19,500, and there was neither sugar nor albumen in the urine.

Except for the partial fixation of the uterine fundus, this would have been an excellent case for radium. However, this substance is always positively contra-indicated in the presence of pelvic infection.

The vagina was packed, and on the following morning 500 cc. of human blood were transferred to the patient by means of the Lewisohn technique. Twenty-four hours later the hemoglobin had risen to 35, the red blood cells to 2,400,000, and one day later the hemoglobin was 40, and the red cell count was 2,300,000.

On the afternoon of this same day 500 cc. of human blood were again given her and forty-eight hours later the hemoglobin read 45, and the red count totalled 3,600,000.

She stood each transfusion without incident or unfavorable after effect. Her systemic condition rapidly improved, her appetite returned, she slept soundly and the cardiac murmur practically disappeared. Four days after the second transfusion, a subtotal abdominal hysterectomy was performed, with the removal of one tube and ovary, the patient left the operating room in excellent condition and made an uninterrupted recovery.

Thus a totally inoperable case was readily transformed into an operable one.

Recently much has been written concerning the merits and demerits of the various techniques of blood transfusion. The citrate method is the one most commonly used. It is simple, is performed quickly, can be done in the ward or in the patient's room as well as in the operating room, does not necessitate an outlay of extra tubes, the handling of extra canulas, needles, paraffin, or the direct exposure of donors and recipients vessels.

The writer has performed a great many of these operative procedures with most gratifying results.

In infants greatly emaciated or weakened from some congenital or acquired condition, the above technique is impracticable and the operator has to resort to another. The operative risk in such a case can be greatly improved by the administration of 75 to 100 cc. of human blood from one or the other of the child's parents. The preferred technique here is to give the necessary amount of parental blood

into the child's superior longitudinal sinus through the anterior fontanel. Apparently this is a very radical procedure, but in reality it is simple, is easily and quickly done, and up till 1 to 1½ years of age it is absolutely unnecessary to test the blood of the infant with that of the proposed donor for hemolysis and coagulation. In adolescents and adults, this should always be done, but in infants it is superfluous.

In children up till 8, 10, or 12 years, where whole fresh blood is necessary or imperative, whether for hemorrhage, sepsis or toxemia, the subcutaneous elbow vessels are usually too small for use, but as the external jugulars are larger, and readily as accessible, they can be used with ease. When using these veins the best technique is the syringe-canula method. That is, insert a canula with plunger, into

the vein of the donor, and another one into the external jugular vein of the recipient. Remove plunger from the canula in donor's vein and draw up into the syringe (Luer), which has previously been thoroughly washed with 2 per cent solution of sodium citrate, a barrel full of blood. Detach syringe from canula, re-insert plunger to stop the flow, extract plunger from canula in recipient's vein, attach syringe to canula, and gently and slowly push the blood into the child's vein. This can be done over and over again until 120 to 200 cc. or as much blood as is indicated is given. With this technique it is wise to use two or more syringes to facilitate the rapidity of the procedure, by having an assistant wash the unused syringe with sodium citrate solution, while the blood is being transferred from the used one.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

HYPERTROPHIED TONSILS AND THE X-RAY

This subject has been the cause of much bitter controversy. Both sides of the question undoubtedly have merit. But certain it is that irradiation of the tonsils is here to stay, and rightly so, because it is a well known fact that lymphoid tissue is peculiarly susceptible to radiant energy, be its source radium or the X-Ray.

The tonsils after the proper dosage has been administered begin to atrophy, and this atrophy continues for many weeks after the last irradiation has been given. During the atrophic process the contents of the crypts are expressed, and the tonsil is mechanically rid of its infection.

The man who gives this work any thought will of course realize that there are selected cases in which this method of treatment should not be undertaken. It is

needless to say that intelligence, discretion and a thorough knowledge of the instrument in hand is necessary for a thorough carrying out of the X-Ray therapy of the tonsils. This treatment seems to accomplish in the end the same thing that is accomplished by surgical removal, inasmuch as patients with neuritis, arthritis, etc., are completely relieved, when the focus of infection lies in the tonsils.

The possibility is however that the end results will be criticized because of the fact that tonsillar tissue remains in the throats of the patients; for the present generation seems to feel that any tonsillar tissue in a person's throat is sufficient indication to have it removed.

There are many persons today who for reasons of their own will not submit to operation although they may have diseased tonsils. These persons can be relieved of

their general symptoms, their throats made more comfortable, and their recurring attacks of tonsilitis prevented. While the above class of patients far outnumber the persons who cannot be operated upon because of cardiac or renal lesions, the latter can also be readily relieved by X-Ray or radium.

The whole question seems to resolve itself into one of time. If the necessity for the removal of the tonsils is great, then probably operation is best, but if there is no danger to the patient in waiting for four or six weeks, then probably irradiation will prove satisfactory to both the patient and the clinician.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

FURTHER CONSIDERATION OF THE PRESENT STATUS OF THE WASSERMANN REACTION

In the May issue of the Journal I stated that the Wassermann reaction had stood the test of time and even in its present state of much discussion as to its value and the best method of performing the test that it had held its place as a reliable method in the diagnosis of syphilis. The opinion that a routine Wassermann would soon be an accepted procedure was rather emphatically stated.

Recent studies concerning the Wassermann reaction have brought to light many points which show that the test is not absolutely dependable in all instances. Is there anything in medicine that is absolutely dependable?

Probably the greatest authority in the country on the Wassermann reaction and one who has done more to establish a definite and standard technique is John A. Kolmer of Philadelphia. He and his workers in their effort to establish a standard method of performing the test have concluded that probably the most important single factor influencing the results and practical value of the complement fixture test in syphilis concerns the kind of organ extract employed as "antigen." In our opinion the divergent Wassermann reactions observed in different laboratories with portions of the blood of the same person,

have been due in large part to the difference in antigens employed referable not only to a difference in kind but to dosage as well. He concludes further "that the best antigens are mixtures of acetone insoluble lipoids and cholesterin."

An article by Albert Strickler in the Journal of the American Medical Association April 1st 1922 discusses the specificity of the Wassermann test. He calls attention to certain nonluetetic conditions where a positive reaction is usually found. Williams in the American Journal of Syphilis April, 1921 reported a small percentage of positive reactions in patients with diabetes. Many observers have reported positive reactions in the different febrile states especially the long continued and wasting fevers like Typhus and Typhoid. In pneumonia before the crisis, and in malaria during a chill positive reaction has been found in cases proven not to be Syphilitic. Alcohol also influences the test.

These findings should be borne in mind in the diagnosis of syphilis; we should be acquainted with some of the limitations of the Wassermann test; and it should be considered as a symptom and weighed along with other clinical evidence in the diagnosis of syphilis. In spite of the limitations of the Wassermann test it is so indicative of syphilis that a positive reaction should be considered syphilis until proven otherwise.

EYE, EAR, NOSE AND THROAT

W. C. TWITTY, M. D., Rock Hill, S. C.

CHRONIC SUPPURATIVE OTITIS MEDIA.

Clinically any discharge that finds its way through a perforation in the drum membrane and which lasts over a prolonged period, may be referred to as chronic middle ear suppuration. If it continues for more than two months in spite of careful conservative treatment, Mackenzie would consider it as chronic. The prevention of the chronic form of middle ear disease is possible only when we are able to arrest the suppurative form in its acute stage. The local factors that tend to make it so are adhesive bands in the middle ear space left there, probably, after previous attacks of acute secondary catarrh, narrowing of the Eustachian tube anywhere along its course, or, anything whatever that prevents the free discharge of pus is a factor of importance. The normal route for middle ear discharge is down the Eustachian tube and the obstruction to this causes the perforation of the drum and discharge externally. The tube

may be obstructed by adenoids at the mouth of the tube, however, a frequent location for the obstruction is the upper end of the tube. One thing observed and emphasized is the frequency with which local inflammatory swellings clear up after a simple mastoid operation. This, however is not to be urged until other more simple methods have been tried, nor should it be unduly postponed. Nasal obstructions seem to play an important role as a cause of chronicity of middle ear suppuration, and their correction acts beneficially.

A chronic discharging ear should not be looked upon lightly. If, after a reasonable length of time of skillful local treatment, the ear continues to discharge, the mastoid antrum should be opened; otherwise severe complications may arise, some causing even death, but more frequently deafness from destruction of the contents of the middle ear. The Heath operation is the one of choice in my hands. My own experience with this operation has been all that could be desired; the hearing returns, and the discharge ceases.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

SYPHILIS AND ABORTIONS

We have been accustomed to regard the etiology of abortion as largely dependent on syphilis, when no obvious causative factor is found. Some men treat as syphilitic women who have had more than two abortions without obvious cause; the therapeutic test of anti-syphilitic treatment is often applied to cases of habitual abortion.

In a study of 100 unselected cases of abortion, Dougal and McBride, (Brit. Med. J. 1920, i, 632) found only 12 cases with a positive Wasserman and 11 of these had previously borne healthy children at term, and 7 of them presented abnormalities which were adequate causes of abortion. They conclude, therefore, that in less than 10 per cent can lues be considered a factor.

Auto-or medico-criminality as the excit-

ing cause of abortion has been variously estimated from 20 per cent to even as high as 58 per cent. Certainly the role of criminality in abortions has been too little appreciated by many statisticians.

Myers, (Amer. J. OB. & Gyn., 1921, i, 145) in a study of a series of 697 women, reported that there were 1351 children and 1843 abortions, or one abortion to every 1.7 pregnancies. The cases in this series are largely made up of private patients and are therefore more favored as to work, care and advice than the series published from public clinics. In this series lues played a minor part.

Given a case of abortion every possible factor should be sought for, but it would seem that we must look further afield than a blood test for the etiology, in the majority of cases.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

Almost without exception the diarrheas in Infancy so far seen by me this summer have been of the Par-Enteral Type with the following causes: Tonsilitis, Pyelitis, Bronchitis and Otitis Media. In all cases accompanied by straining examine the urine for pus.

Some cases have been of the Mechanical Type, due especially to purgation by calomel or castor oil, and several have occurred from rapid drinking of ice water.

In breast-fed infants it is unwise to consider a diarrhea as primary until every other outside cause has been eliminated.

Wouldn't it be kinder to quit using the

term "Colitis" for every case of diarrhea that, because of straining, passes bloody stools? This term frightens and worries the mothers unnecessarily.

The following list of food stuffs used in Infancy is given in the hope that the comparisons with nature's food, breast milk, will be helpful and lead to their more intelligent use.

Don't attempt to fatten your babies this summer, its better to have them gain only a little and keep strong and free from digestive upsets. Lessen the fats and increase the water intake.

IN RAW STATE					PREPARED AS DIRECTED FOR 6 MTHS. AGE					WHERE FAULTY				
	Fat %	Sug. %	St'ch %	Pro. %	Cin 1oz.	Fat %	Sug. %	St'ch %	Pro. %	Cin 1oz.	Fat %	Sug. %	St'ch %	Pro. %
Woman's Milk ---	3.5	6.5	—	1.75	21.									
While Cow's Milk -----	4.	4.	—	4.	.20	Milk 22oz Sug ½ oz L-Wat 4oz Wat 9oz (5x7 oz)	2.5	4.	—	2.5 15. 525.				
Skim Cow's Milk -----	1.5	4.	—	4.	14.	Skim Milk 30oz Sug 1oz Lime Wat 5oz (x7 oz)	1.3	6.2	—	3.4 15. 525.				
Nestle's Food---	5.5	59.	5.4	14.	120.	1 ½ oz in 8oz Water, dilution 1 to 5. (6x6oz)	1.1	12.	1.1	3. 23. 828.	—	X		X Sterilized
Horlick's Malted Milk -----	8.8	68.	—	16.	135.	7 Dram Horlicks, 6oz Wat (dil 1 to 7) (6x7oz)	1.2	10.	—	2.3 17. 714.	—	X		X Sterilized
Condensed Milk -----	9.	54.	—	10.	90.	Dilute 1 to 6 and feed 5 x 7 oz.	1.5	9.	—	1.6 15. 525.	—	X		Sterilized
Mellin's Food---	.16	79.	—	10.	120.	½ oz Mellins 12oz Milk 4oz Wat Dil 32 times (6x6)	2.4	4.4	—	2.6 15. 525.				
Dextri-Maltose --	.14	98.	—	.75	110.	Used as Sugar with Cow's Milk								
Eskey's Food---	3.5	54.	30.	5.82	128.	2oz Eskey's, 32oz Milk, 16oz Water (7x7)	2.8	4.7	1.2	3. 16. 785				X
Albumin (Egg) Water -----	.1	—	—	13.	15.	1 Egg-white to 16oz Water. 104 equals 40oz	.06	—	—	.8 1. 40.	—	—	—	— (For. Alb
Barley, Robinson's ---	.1	—	82.	5.	111.	½ oz to 16oz Water. 4oz every 2 hrs. equals 40oz	.03	—	2.5	.4 2. 80.	—	—	—	—
Cereals (Hominy)	.2	—	18.	2.	.23	2 ounces three times a day	.2	—	18.	2. 23. 138.	—	—	—	—
Panopeptone (& Allied alcohols.	—	—	—	6.	55.	1 teaspoonful diluted 2 times. 1 oz a day	—	—	—	.7 7. 55.	—	—	X	—
Beef Juice and Extr. ----	—	—	—	9.6	.11	½ teaspoon in 4oz wtr. 3 teaspoons a day (dil to 64)	.1	—	—	.2 33.	—	—	—	—
Beef Broth -----	.6	—	—	.4	1.25	5 ounces three times a day	.6	—	—	.4 1.25 20.	—	—	—	—
Butter -----	85.	—	—	2.5	214.	½ oz a day					107.	—	—	—
Candy -----	—	96.			104.	2 ounces a day					208.	X	—	—
Sugar -----		100.			117.	1 ounce a day					117.	—	X	—

The above figures approximate only—Average 6 months baby needs 525 Calories per day — equals too little X equals too much

NEWS ITEMS

The foundation stone of the new School of Tropical Medicine at Calcutta, India, was laid by the Governor on February 14. The Indian government donated \$195,000 for the site and will contribute towards the support of the school.

At the first annual meeting of the Australian Public Health Association, it was decided to issue an official public health journal to be known as the Bulletin of the Public Health Association. The first number appeared in January.

The Board of Trustees of the University of Pennsylvania, at a meeting held February 20, decided that beginning with 1923, a three years' collegiate preparation will be required for admission to the Medical School.

Appropriations of \$18,210,353, for colleges and universities, \$12,029,513 for medical schools and \$646,000 for colored education have been announced by the General Education Board during the fiscal year.

The contracts have been awarded for the construction of the Medical Arts Building, at a cost of approximately \$1,000,000, at Dallas, Texas.

John D. Rockefeller's gifts to the General Board for medical education have reached \$45,500,000.

Seven government hospital buildings, at Augusta, Ga., to cost \$283,000, have been contracted for.

The University of London was given \$2,000,000 for a school of hygiene by the Rockefeller Foundation. This was in addition to a previous award of \$5,000,000

from this source to the medical educational facilities of the British metropolis.

Infant mortality is 15 points lower in New York City than in the state's rural districts.

The Commonwealth Fund of New York City has just given a grant of \$26,750 to the American Society for the Control of Cancer for a field service to educate the public.

In order to reduce expenses, the League of Red Cross Societies had decided to move its headquarters from Geneva to Paris. This step will reduce the expenses \$15,000 a year.

Cooperative anti-mosquito work in 45 towns situated in Southern States has cut down their malaria rate by 75 to 90 per cent according to the U. S. Public Health Service. It has saved its cost several times in doctor's bills, medicine and lost wages, all of which items are positive and ascertainable.

A campaign to raise \$2,000,000 is being conducted by the American Legion, with headquarters in the Hotel Astor, New York City, for the establishment of a tuberculosis camp at Tupper Lake in the Adirondacks to take care of ex-soldiers. Preparations are being made to take care of 1700 men during the first year.

The U. S. Public Health Service reports that efforts during the year to discover the unidentified food substance whose absence from the diet causes pellagra, have excluded two of the three known vitamins. The search for the missing element is being steadily narrowed.

Work has been started on the new \$1,000,000 hospital of the Sisters of St. Mary, St. Louis. The new building will accomodate 200 patients and be seven stories high.

The Sealy and Smith Foundation of the John Sealey Hospital, Galveston, Texas, has been granted a charter by the Secretary of State. The purpose of this newly-incorporated foundation is the enlarging, remodeling and equipping of the John Sealey Hospital and other hospital buildings connected with it.

Hong Kong has First Chinese Woman Physician. Dr. Hoashoo, M. B. Ch. B., a graduate of Edinburgh University, is the first of her sex to set up practice in Hong Kong.

Tulane Will Soon Add New Structure to Group. A new building to cost \$50,000 will soon be added to the group of buildings on Tulane Campus. Work is expected to begin immediately.

The American Society for the Control of Cancer, at its annual meeting held recently, made public facts concerning the first endowment fund ever granted to it. The family of Mrs. M. Lasker, New York City, has entrusted the society with the sum of \$50,000 as a memorial fund in memory of Harry M. Lasker, who died of cancer on March 13, 1921.

The name of the United States Public Health Service Hospital 61, at Fox Hills, Staten Island, N. Y., has for the third time been changed. It will in the future be known as United States Veterans' Hospital 61.

According to the Minister of Health, the Rockefeller Foundation has offered \$2,000,000 toward the costs of building and equipping a school of hygiene in London.

St. Bartholomew's Hospital, London, England, is perfecting plans for the proper celebration of its eighth hundredth anniversary. The Prince of Wales is president of the hospital and the lord Mayor of London is chairman of the committee.

The expenditure of 2,500,000 francs (\$183,750 at present rate of exchange), for the purchase of radium, to be used in the public hospitals for the treatment of cancer, has been authorized by the city of Paris.

On January 30, last, at Havana, Cuba, was founded the Cuban Society of Gastro-Enterology. The object of the society is to promote the study of diseases of the digestive system.

Dr. Pearce Bailey, famous neurologist, teacher, author, colonel and head of his branch in army medical service during the war, died at his New York home March 2nd.

According to a resolution adopted at the Universal Postal Union Convention, held recently at Madrid, opium, morphine, cocaine and other narcotics are barred from international mails.

Dr. John B. Voor, of Louisville, Ky., Assistant Director of the American Red Cross Commission in Poland, 30 years of age, died from typhus there. Dr. Voor is the first member of the American Red Cross Commission to die in Poland.

There are nine medical schools in Canada. The United States has a medical school for every million and a quarter of inhabitants, Canada one for every 900,000. U. S. has one medical student for every 8,000 population, Canada one for every 3,700. U. S. has one doctor for 720 population, Canada one for 1,050.

SOCIETY REPORTS

FIFTH DISTRICT MEDICAL SOCIETY OF SOUTH CAROLINA

Officers—Dr. W. R. Wallace, President; Dr. G. W. Poovey, Dr. W. M. Love, Vice-Presidents; Dr. G. A. Hennies, Sec. and Treas; Dr. Robt. Sumner, Dr. S. L. Allen, Dr. C. S. McCants, Dr. R. H. McFadden, Dr. L. T. Gregory, Executive Committee.

Counties—Chester, Fairfield, Kershaw, Lancaster, York.

The semi-annual meeting of district society was held in Great Falls, S. C., on Tuesday, May 30, 1922.

Come.

Program—10:30 A. M.

Opening Prayer—Rev. W. J. Hunnicutt, Great Falls.

Address of Welcome—Mr. Robt. S. Mebane, Great Falls.

President's Address—The Future Policy of Medicine, Dr. W. R. Wallace, Chester.

Surgery of Cripples; Movie Film and Lantern Slides, Dr. O. L. Miller, Gastonia. N. C. Discussion opened by Dr. C. M. Rakestraw, Chester.

The Diagnosis and Treatment of Skin Cancer; Lantern Slides, Dr. J. A. Elliott, Charlotte, N. C. Discussion opened by Dr. J. W. Corbett, Camden.

Diseases of the Thyroid Gland, Dr. S. O. Black, Spartanburg. Discussion opened by Dr. W. W. Fennell, Rock Hill.

Classification and Treatment of Diarrhoea in Children, Dr. D. L. Smith, Spartanburg. Discussion opened by Dr. C. S. McCants, Winnsboro.

Advantages of the Laboratory to the Physician and Surgeon, Dr. W. J. Henry, Chester. Discussion opened by Dr. R. G. Hamilton, Winnsboro.

Subject unannounced, Dr. J. R. Miller, Rock Hill.

2:00 P. M.—Fish dinner in the park.

WILLIAMSBURG COUNTY.

The Williamsburg County Medical Society met in regular monthly session Thursday, May 11, 1922, Kelley Sanatorium, Kingstree, S. C., at 12 M., with Dr. W. G. Gamble in the chair.

The following answered roll call: Drs. W. G. Gamble, T. S. Hemingway, E. T. Kelley, T. C. Harper, and B. M. Montgomery.

Minutes of the previous meeting were read and approved.

The program on this occasion consisted of:

(1) Report of a case of Subtemporal Decompression for the relief of Intracranial Pressure, by Dr. E. T. Kelley.

(2.) The X-Ray as an Aid in Diagnosis, by Dr. B. M. Montgomery.

Program announced for next meeting: Drs. W. M. O'Bryan and W. C. Rogers.

At the Clinic held in the afternoon, six reported for examination and treatment.

B. M. Montgomery, Secretary.

ALLENDALE COUNTY

The Allendale County Medical Society met at Fairfax May 9th, Dr. J. E. Warnock in the chair. The minutes of the last meeting were then read and approved. Two very interesting cases were reported by Drs. Warnock and Folk which were discussed freely by those present. Drs. Tuten and Loadholt were appointed on a committee to arrange for the meeting of the Eighth District Medical Association on June 21st at Fairfax. Our members speak in the most complimentary terms noted in the improvement made in the South Carolina Medical Journal.

G. W. I. Loadholt, Secretary

MINUTES

MINUTES OF THE HOUSE OF DELEGATES OF THE SOUTH CAROLINA MEDICAL ASSOCIATION.

Seventy-Fourth Annual Meeting, Rock Hill, April 18, 19, 20, 1922.

The house of Delegates met on Tuesday, April 18th, at 8 P. M., and was called to order by the President, Dr. H. L. Shaw, of Sumter.

The report of the Committee on Credentials was read by Dr. Talley Taylor.

The report of the Secretary-Treasurer was presented by the Secretary, Dr. E. A. Hines, of Seneca. Upon motion by Dr. Hines, a special committee was appointed by the President to consider the recommendation for holding the next annual meeting in Charleston, the committee consisting of Dr. C. B. Earle, of Greenville, Dr. W. F. R. Phillips, of Charleston, and Dr. T. H. Dreher, of St. Matthews. Upon motion, the rest of the Secretary's report was adopted.

ANNUAL REPORT OF THE SECRETARY-TREASURER, 1921.

By E. A. Hines, M. D., Seneca, S. C.

For the fiscal year closing December 31st, 1921, thirty-seven constituent county societies reported a total membership of seven hundred and twenty six. There was a slight loss of members, twenty-seven over the previous year. This decrease has probably been due to the lack of good business methods on the part of some of the societies. In addition, the great financial depression had to be reckoned with. The showing is remarkably good, however, under the circumstances.

According to the last A. M. A. directory, there are in South Carolina one thousand four hundred and fifty-two (1,452) doctors. It would appear that the State Medical Association has not yet attracted all of the eligible members. Our ratio compares favorably with that of most of the other states. The Columbia Medical Society had the largest membership in 1921, ninety.

The scientific interest throughout the State continues to be worthy of special mention. Very much better programs are now the rule in nearly all societies. The district societies under the guidance and stimulation of the State Association officers and especially the Councilors, continue to prosper. The removal of members of the profession from the smaller communities and rural districts to the cities, while not so marked as in many sections of the country, is nevertheless a serious problem. It is certain to claim our attention in the near future.

As your Secretary, I attended the Conference of State Secretaries at Chicago November 11, 1921. I was specially invited to open the discussion of the leading paper by Dr. Frank Billings, Secretary of the Board of Trustees of the A. M. A., on the following subject: "The American Medical Association, Past, Present, and Future."

As your Secretary, I attended the meeting of Southern Secretaries at the Hot Springs Meeting of the Southern Medical Association in November, 1921. This new organization of officers of the Southern States bids fair to be very helpful to organized medicine in the South.

We have lost by death an unusually large number of the most loyal members of the State Medical Association. The Committee on Necrology will pay due respects to our departed brethren.

I desire to propose two amendments to the Constitution, the same to be acted upon at the next annual session; namely: to amend Article 9, Officers. Sec. 1, to the effect that a speaker and vice speaker of the House of Delegates shall be included in the list of officers of the Association. Such an officer has for many years been elected by the House of Delegates of the American Medical Association and now by many states. An acceptable speaker becomes an expert in parliamentary procedure, is re-elected for a number of years, and thus becomes deeply interested and in closer contact with the business of the Association. He will, therefore, be a great source of inspiration to all of the officers of the organization. Also that only one vice-president be provided for instead of three.

A further amendment to Section 2, Article IX, Officers, that the President be elected two years prior to his installation. He will serve one year as President-elect and become thoroughly familiar with the working of the Association before he takes up the office. He will have then one year of active service. He will still be elected annually. It can readily be seen that the contact of two years will be much more helpful to the organization than is now the case. The election of a speaker and vice-speaker of the House of Delegates will free the President from many details and add very much greater dignity to his office.

With the close of this session, our honored Association will enter upon its seventy-fifth year. It was organized in Charleston February 14, 1848. For three-quarters of a century it has held up the torch of scientific learning to the civilized world. Many South Carolina physicians have written their names at the top of the scroll of eminence. Just a moment to mention only a few, some of whom are known to the remotest confines of the medical world. Some of them put the corner stone in position upon which this splendid structure has been erected, viz: Dr. James Moultrie, the first President; Dr. F. P. Porcher, Dr. W. T. Wragg; Dr. P. C. Gaillard; Dr. J. R. Bratton; Dr. E. Horlbeck and Dr. H. Ravenel.

In commemoration of the organization of the South Carolina Medical Association, I recommend that the seventy-fifth anniversary be held in the city of Charleston in 1923 and that it be made a home-coming meeting, invitations to be extended to every South Carolina physician living outside of the State and that a special program be prepared with invitations to such allied organizations as the South Carolina Nurses Association, the South Carolina Hospital Association, the South Carolina Public Health Association and the South Carolina Pediatric Society. Also that the social feature include a special invitation to the wives and daughters of the members of the State association. Such a meeting will undoubtedly prove to be great stimulus to further advancement of our organization. I need but remind you for a precedent that the fiftieth anniversary of the founding of this organization was held in the City of Charleston under the presidency of Dr. Walter Porcher. Dr. R. B. Rhett was President of the Medical Society of South Carolina, Charleston County, and we quote the following from

his brilliant welcoming address on that occasion:

"Some of you think that the ordinary Charlestonian feels somewhat as this couplet would infer:

A soul from earth to Heaven went,
To whom the saints, as he drew near,
Said, "Sir, what claim do you present
To us to be admitted here?"

"In Charleston I was born and bred,
And there have lived," he proudly said,

St. Peter mused and shook his head,
Then as a gentle sigh he drew,
"Go back to Charleston, friend," he said,
"Heaven is not good enough for you."

I have been informed that at the last meeting of the Charleston Society, the above proposition was approved and their delegation instructed to extend an official invitation to that effect.

The financial report of the Secretary-treasurer and editor of the Journal will be presented by the Chairman of the Council.

Report of Special Committee.

Your Committee appointed to consider the recommendation of the Secretary-Treasurer that we meet in Charleston 1923, unanimously recommended the adoption of his suggestion as to place of meeting. The Committee also recommended that the programme and entertainment of the meeting be left to the various appropriate Committees. Signed,

T. C. Dreher, Sec.-Com.

W. F. R. Phillips,

C. B. Earle, Chairman.

REPORT OF CHAIRMAN OF COUNCIL

Mr. President and Gentlemen of the House of Delegates:

At your last meeting you instructed council to look into the matter of the Journal of the South Carolina Medical Association and take the necessary steps to improve it. This we have done. The contract for printing, paper etc., for the previous year did not expire until the beginning of this year, so we could not make necessary changes until January of this year. Council met in Columbia on January 9, 1922, and reorganized the associate staff and took such steps as was found proper to make the official organ of this Association a Journal commensurate with the dignity and high standing of the association's

membership. We submit to you the Journals of February and March as being in keeping with the tone of work of the members of the South Carolina Medical Association. Again we wish to commend the Editor of this Journal for his untiring efforts in its behalf and thank him publicly for the self-sacrifice that he has made in the advancement of medicine in this state and further:

Council wishes to state that to run the Journal hereafter and get out issues each month equal in tone to those of February and March it will cost considerably more than it cost to run it before these dates. The price of paper and printing is still high.

Inasmuch as the Journal is the official organ of the State Medical Association, council advises that it be continued, even though it costs more, on a high plane of activity, because it is an essential factor in making the State Medical Association a worthy organization.

ILLEGAL PRACTICE

The Chiropractor has given considerable trouble in various places in the state, not that he takes the practice of regularly qualified practitioners, but that he tries to apply his cult in the face of the law and with flaming advertisements in the press of the country, thereby casting a stigma upon the fair name of true medicine and surgery and flaunting these stigmatised and ill conceived thoughts into the public mind with utter disregard of law and order or the principles of right.

In many places in the state he has been tried and convicted in the city and state courts for practicing medicine without a license, wherupon he has used various technicalities of shrewd lawyers, gotten out on bond, taken appeals etc., and today, like the bootlegger and the boll weevil, he is still with us.

All who are interested in law and order, however, may take consolation in the fact that the Supreme Court decision of last week proclaimed the present Medical Practice Act in this State constitutional and it has been the constitutionality of the act that many chiropractors have seen fit to attack in order to evade the law.

We verily believe that the time has now come in the history of medicine in this state that all who wish to practice medicine in South Carolina will have sense enough to see that it is necessary to pass the proper examination before the State Board of Medical Examiners.

Council wishes to take this opportunity to

publicly thank the committe on Public Health and Legislation in this Association and all the members of the legislature from this Association and profession who so ably defended the present Medical Practice Act when it was being put to a test in the last Legislature.

We recommend that the Association instruct its Secretary to write to the leading ethical pharmaceutical, instrument and publishing houses and hospitals calling their attention to the improvement in our Journal and invite them to advertise therein.

And further we wish to call the attention to the House of Delegates to the able editorials which have appeared in recent issues of the Journal and to commend the Associate Editors for their work and beg that they continue to merit the approval of this body.

Respectfully submitted,
L. O. Mauldin, Chairman.

Seneca, S. C., April 15, 1922.

Dr. E. A. Hines, Secy-Treas., South Carolina Medical Association, Seneca, S. C.

Dear Sir:

In accordance with your instructions, I have audited the books and accounts of the South Carolina Medical Association and attach hereto statement, made in the form of your annual report to the Association, which exhibits the receipts and disbursements for the year ending December 31st, 1921, also a statement of the assets of the Association, there being no liabilities.

Respectfully,
Sydney Bruce, Auditor.

Report of South Carolina Medical Association, 1921:

RECEIPTS

Balance January 1, 1921-----	\$ 290.59
Membership dues-----	2,105.00
Sundry receipts-----	3.00
	<hr/>
	\$2,398.59

DISBURSEMENTS

Salaries -----	\$1,537.65
Office Expense -----	79.00
Stamps -----	34.00
Stenog. reporting State Meeting----	160.00
Traveling expenses Sec-Editor-----	203.90
Miscellaneous -----	128.06
Balance in Seneca Bank Dec. 31, 1921	255.98

\$2,398.59

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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INTERNAL MEDICINE
GEORGE R. WILKINSON, M. D., Greenville, S. C.

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WM. P. CORNELL, M. D., Columbia, S. C.

OBSTETRICS AND GYNECOLOGY
R. E. SEIBELS, M. D., Columbia, S. C.

UROLOGY
MILTON WEINBERG, M. D., Sumter, S. C.

ROENTGENOLOGY
FLOYD D. RODGERS, M. D., Columbia, S. C.

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NERVOUS AND MENTAL DISEASES
B. O. WHITTEN, M. D., Supt. Training School for
the Feeble-minded, Clinton, S. C.

EDITORIAL

THE MEETING OF THE SEVENTH DISTRICT SOCIETY GREAT SUCCESS

The recent meeting of the Seventh District Medical Society from all reports was one of the best from both a scientific and attendance standpoint ever held in the State. The program compares favorably with that of a State meeting. The stimulus received by all of the men present will long be reflected in the upbuilding of the constituent county societies in that District. The officers of this District and especially the Councilor, Dr. T. R. Littlejohn deserve special commendation for their enthusiastic efforts. The district meetings throughout the State have all been highly successful in recent years. The Board of Councilors as now constituted, Dr. L. O. Mauldin of Greenville, Chairman, have all been aggressive

in their respective districts and with universal success.

DEATH OF DR. MILES J. WALKER

The death of Dr. Miles J. Walker of York at a hospital in Richmond on Tuesday night, July 11th, removes one of the enthusiastic members of the South Carolina Medical Association. Dr. Walker was keenly interested in the organization. He served as Councilor of his District for a number of years. He had served as Vice-President of the State Medical Association and at the time of his death was a member of the Executive Committee of the State Board of Health. Dr. Walker was for many years active as a medical officer in the National Guard, retiring with the rank of Major.

The following committees have been appointed to serve the South Carolina Medical Association for the year 1922:

On Public Policy and Legislation.

Dr. A. E. Boozer, Chairman----Columbia
 Dr. D. M. Crosson -----Leesville
 Dr. E. H. Barnwell -----Martins Point

On Necrology.

Dr. R. A. Marsh, Chairman ----Edgefield
 Dr. T. A. Pitts -----Saluda
 Dr. J. B. Setzler -----Newberry

On Scientific Work.

Dr. W. F. R. Phillips, Chairman-Charleston
 Dr. F. B. Johnson -----Charleston
 Dr. W. R. Wallace -----Chester

Health and Public Instruction.

Dr. Leon Banov, Chairman----Charleston
 Dr. R. G. Hamilton -----Winnsboro
 Dr. Jean LaBorde -----Columbia

On Child Welfare.

Dr. W. P. Cornell, Chairman ----Columbia
 Dr. V. W. Brabham -----Orangeburg
 Dr. C. H. Blake -----Greenwood
 On Study and Prevention of Tuberculosis.

Dr. G. R. Wilkinson, Chairman --Greenville
 Dr. J. D. McDowell -----York
 Dr. Jas. S. Fouche -----Columbia

On Study and Prevention of Venereal Diseases.

Dr. Milton Weinberg, Chairman----Sumter
 Dr. Wm. R. Barron -----Columbia
 Dr. T. M. Davis -----Greenville

On Mental Hygiene.

Dr. B. O. Whitten, Chairman -----Clinton
 Dr. J. F. Munnerlyn -----Columbia
 Dr. O. B. Chamberlain -----Charleston

On Hospital Standardization.

Dr. F. H. McLeod, Chairman----Florence
 Dr. J. E. Edwards,-----Spartanburg
 Dr. R. S. Cathcart -----Charleston
 Dr. W. W. Fennell -----Rock Hill
 Dr. J. R. Young -----Anderson

INCREASE OF MEMBERSHIP

The President of the State Medical Association, Dr. C. F. Williams, and the Secretary, at a recent conference, decided

to put on a campaign for the increase of the membership of the South Carolina Medical Association. There are about two hundred doctors in this State who do not belong regularly to the organization. At this writing the prospects appear good for putting into the field an organizer from the American Medical Association who will visit personally eligible members. In the meantime, the cordial cooperation on the part of the Council, the officers of constituent county societies and the membership in general will go far towards facilitating this work.

THE ASSOCIATE EDITORS REQUEST QUESTIONS ON SCIENTIFIC TOPICS.

The Journal has been interested in developing a question and answer method of presenting scientific facts insofar as practicable. The Associate Editors have volunteered to answer questions with reference to their department. They will be pleased to have requests for special subjects to be presented. In other words, the Associate Editors desire to make their Departments worth while to the doctors on the firing line. So please write them at once.

MATERNAL MORTALITY IN SOUTH CAROLINA.

In this issue of the Journal, Dr. R. E. Seibels, Editor of the Department of Obstetrics and Gynecology, has presented statistics showing the enormous maternal mortality in South Carolina and calls attention to the fact that South Carolina has the highest maternal death rate of any of the states. In this regard, the action of the Advisory Council of the Child Hygiene Bureau of the State Board of Health may be worth noting. This Council held a meeting at Columbia with the director of the Child Hygiene Bureau and the State Health Officer and adopted resolutions urging that

the Executive Committee of the State Board of Health take steps immediately to increase the provisions for hospital care of maternity cases in all of the existing hospitals in South Carolina and those contemplated or under construction to the end that maternal and infant mortality may be great-

ly reduced. The Executive Committee of the State Board of Health at its meeting held in Columbia, July 12th, approved of the resolutions presented by the Advisory Council. This step, if carried out promptly will provide a means for attacking this problem that promises much.

ORIGINAL ARTICLES

ACUTE OSTEOMYELITIS IN CHILDREN

By George H. Bunch, M. D., Columbia, S. C.

Osteomyelitis has for a long time been described and understood. Striking in onset and characteristic in development, its recognition should be easy. Although its proper treatment is simple and effective, our experience shows that because of delay in making the diagnosis and in giving the treatment, the results are often disastrous. Carelessness in examining the patient is largely responsible for our overlooking the condition and treating it for rheumatism, instead of recognizing it as a true surgical emergency and insisting upon immediate operation. Our mental apathy makes this disease a reproach to medicine. Children die or become crippled and maimed for life, that by prompt surgical interference could be saved. In this paper, we shall not attempt an exhaustive study of the disease, nor have we much to add to our knowledge of it. We shall deal with fundamentals, that we may be better brought to a realization of our shortcomings and responsibilities to these unfortunate children.

Acute osteomyelitis is acute suppuration of bone and is due to infection, to the invasion of the bone marrow by bacteria. Staphylococci are found most frequently, but streptococci or any of the pyogenic bacteria

may cause the condition. It is a disease primarily of childhood and adolescence. Boys are three times more liable to it than girls. Exposure predisposes to it. Local trauma, by lowering the resistance of the bone, may cause it. The acute infectious diseases are sometimes followed by it. Many cases come as an infection to the bone through the blood from a suppurative focus elsewhere. Boils are common sources of infection, indeed osteomyelitis has been called "bone furunculosis."

The disease begins with intense, unremitting pain, localized in the shaft or over the epiphysis of one of the long bones. Continuous pressure anywhere along the shaft in a short while becomes unbearable. The attack may begin with a chill, and there is high fever, usually from 103 to 105. Both the total and the differential leucocyte count is high. The child is septic and acutely ill. There may be delirium. The joint is not swollen and may be gently moved without causing additional pain. The clinical picture is that of an acute phlegmon in an unyielding bony cavity. The destruction of tissue under such conditions is rapid. The absorption from such pent up infection is overwhelming. The red blood corpuscles are made in the red bone marrow, which is to this extent a part of the vascular system. The danger of septic emboli getting into the blood stream from the infection in the marrow and causing septicemia or pyemia must be apparent. In a few hours, the whole

marrow cavity may be filled with pus. In a few days, the epiphyseal lines may liquify, give way, and the joint become a part of the abscess cavity. The periosteum becomes separated from the bone by pus. The shaft dies, and lies practically unattached in the abscess cavity, literally floating in pus.

The diagnosis should be easy, but may be confusing. This is a disease of the bone marrow or of the periosteum about the bone primarily, and not of the joint, as is rheumatism. The pathology, the pain, the tenderness, is in the shaft of a long bone, and not in the joint. The diagnosis of every inflammatory condition in a child's arm or leg as rheumatism and the routine giving of salicylates without a careful examination of the part is negligence that is a serious reflection on us. There is one point in the diagnosis that we wish to stress with all emphasis, and that is: the X-ray does not show early bone inflammation. The X-ray findings are always negative in early osteomyelitis. This is a fact that is often forgotten.

The treatment of acute osteomyelitis is drainage. The only way to drain the marrow cavity, the Haversian canal, of a bone, is by an opening through the cortex of the bone. The condition is a real surgical emergency. The infection, the pus, is under tension. The bony shell cannot swell or give to the inflammation. Every hour adds to the destruction of the bone, to the toxemia of the patient, to the danger of pyemia and septic foci in other bones or tissues of the body. Elaborate equipment or technique is not necessary for the relief of the patient. The late John B. Murphy said that at first, an opening through the cortex with an awl or gimlet would do. This gives a vent to the pus, relieves tension, and if done early, cures the patient. Surely such a simple procedure can be safely done by anyone at all familiar with surgical principles in any house where boiling water and bichloride tablet can be had to

make reasonable asepsis possible. We have thought of the possible danger of carrying infection into the bone in going through the infected soft parts in operating upon a case of suspected osteomyelitis. What is the danger of causing an osteomyelitis in a child that has an infection in only the soft parts or in the periosteum? We have found no satisfactory answer to this question in the literature on the subject, but feel sure that if the symptoms are sufficient to make one suspect infection of the bone, that an opening should be made into the bone and drainage provided. In the first few hours, free pus may not have formed and when one does not see pus coming from the opening in the bone, it does not necessarily mean that the bone is not infected or that the drainage will not cure the patient. We have in recent years made a practice of applying an Esmarch bandage to force the blood out of an extremity and a tourniquet to hold it out during operation. Bone work is associated with considerable shock. These little patients are toxic and every drop of blood possible should be saved. A longitudinal incision is made over the infected bone, the soft part separated and the periosteum opened and reflected from about the bone. We make the cylindrical bone shaft into a shallow trough, practically from end to end, being very careful to preserve the periosteum and not to scrape away the diseased marrow or endosteum; for it is from these tissues that new bone is to be regenerated and a new shaft formed. It is no more necessary to remove the marrow than it is to remove the infected soft parts in any other suppuration. One must also be careful to preserve the epiphyses when working near the ends of the shaft, for if the epiphyses are destroyed, the bone will not grow in length as the child develops.

The operation need take only a few minutes in a small child, for the bones are soft and cut readily. The shaft, even though dead, should not be removed at the

primary operation. If left, it acts as a splint around which the new bone forms, preserving the length and the shape of the limb. After three or four months, there is a second operation, at which the dead shaft is removed from within the new, living shaft that has been formed from the periosteum. If the periosteum does not die, the power of bone regeneration in children is wonderful. Years ago we operated upon a girl of seven from the orphanage, with an acute osteomyelitis of the tibia of several weeks duration. She was very septic. The shaft of the bone was dead and was floating in pus that separated it from the periosteum. The shaft was troughed and left. After operation, the fever continued high and the general condition of the child did not improve. Thinking the drainage might be better without the shaft, we removed it. Convalescence was slow and trying. After four or five months waiting for the infection to subside and for the patient to regain her strength, an X-ray examination was made before attempting to transplant the shaft of the fibula into the head of the tibia to restore the support of the leg. We were very agreeably surprised when Dr. Gibbes reported that the shaft of the tibia was entirely regenerated. The foot was badly inverted because of the tibia having been removed, necessitating a plastic operation for the relief of the deformity by an orthopedic surgeon.

Dakin solution has been a wonderful help to us in overcoming the infection after operation for osteomyelitis. We are convinced, after several years experience with the Dakin, that its real sphere of usefulness is in bone work; in compound fractures in preventing the development of infection, and after operations for osteomyelitis in overcoming the infection that is already present, Dakin is supreme. By it we obtain results that we could not hope for otherwise.

Since 1918—five years—our records show

that we have operated upon fifteen cases of acute osteomyelitis in children. The ages have varied from three months to eighteen years. There were ten males and five females. There were thirteen whites and two negroes. We doubt if this represents the true difference in the races, however, for there are probably more negroes than whites who do not come to a surgeon for treatment. The tibia was involved six times; the humerus, the femur, the lower maxilla, and the fibula twice each; the scapula was the seat of the disease once. There was a history of injury preceding the disease in four cases; of furunculosis in two, of a burn in one, of sore throat in one, of influenza in one—leaving six of the fifteen cases in which the etiology was not apparent. The shortest time from the onset of the disease until it was seen by the surgeon was ten days; the longest time was four months. Six cases came that had been lanced after the pus had perforated the periosteum and infiltrated the soft parts. In these, imperfect drainage was already established. One little boy with a diseased tibia had to have his knee joint drained. A boy of eight months had his elbow joint destroyed from advanced osteomyelitis of the humerus. Another boy of ten came a month after having a tooth pulled. His lower jaw from the symphysis to the articulation was dead, and was removed in two fragments by a hemostat, without even making an incision, through the suppurating wound in his mouth. The periosteum was destroyed. The jaw will not regenerate. The child has no lower teeth on that side and is horribly deformed. A girl of eleven comes with an acute osteomyelitis of the humerus of one months duration. She has emaciation, fever, sweats, anemia. The upper epiphysis of the humerus is destroyed and although an operation has cured the osteomyelitis, her arm, even as an adult, must be the length of the arm of the girl of eleven.

This is not a large series of cases, but it

is quite enough to show some of the disastrous consequences of neglected osteomyelitis in children. The disease is not uncommon, even in infants, and it behooves us to be on the lookout for it.

AORTIC INSUFFICIENCY

Thesis by J. F. Woods, Member of the Graduating Class 1922 Medical College of the State of South Carolina, Charleston, S. C.

Aortic Insufficiency is the failure of the aortic valves to prevent a return flow of blood from the aorta into the ventricle during diastole, owing as a rule to a malformed or diseased condition of the aortic leaflets or a stretching of the aortic ring; the condition being followed by sclerosis, crumpling, curling or contraction and finally calcification of the aortic valves.

History: Hodgkin in 1829 was the first to give a clinical description of the disease. Corrigan in 1832 offered an explanation of its most prominent symptoms. Since then numerous men have offered explanations for the pulse, the blood pressure, etc.

Etiology and Pathology

Aortic insufficiency makes up from 30-50 percent of all valve lesions.

Aortic Insufficiency is found more commonly in males than females and in those who have reached middle life. Whether race is a predisposing factor cannot be determined but the disease is found more often in the negro race than in the white. In negroes it is twice as frequent as mitral lesions. The explanation of this probably lies in the fact that the negro generally lives under more unhygienic surroundings, does a much harder class of work, and is affected more profoundly by those diseases that cause aortic regurgitation, some of which are syphilis, rheumatism and nephritis. Men are more accustomed than women to work that requires great muscular effort because they are made physically stronger

than women and civilization expects them to bear the brunt of hard work. By the time these men have reached middle life, having been subjected to exposures and exhaustions of varying sorts, they are physically much older than they really are; their vitality has been sapped, and they show the result of this extra work in a body the seat of arterio-sclerosis and usually an associated nephritis with high blood pressure. The above facts have been stated by various writers but are substantiated by a review of 63 cases of aortic regurgitation that have been treated in Roper Hospital. Of these the average age was 44 years. Males predominated the series with 88 percent against 22 percent of females. In regard to race negroes were affected about six times as often as whites there being 84.2 percent negroes and 15.8 percent whites. These latter figures are probably somewhat higher than really exists, due to the fact that more negroes are treated in the hospital than whites. Of the 63 cases there were 40 colored males and 9 white males, 13 colored females and only one white female. The youngest male was 19 years old, the oldest 70; the youngest female 22 years and the oldest 86. It will be seen from these figures that the negro males predominate, being 63.5 percent of the total number. Hard work requiring great muscular effort is undoubtedly a factor in the production of the disease. This is evidenced by the fact that there were 27 common laborers, 6 drivers, one machinist, one stone-cutter, one carpenter and one plumber among the 37 males whose occupation was recorded. Thirteen of the fourteen female patients were housekeepers, the occupation of the other one not being given.

Aortic insufficiency due to congenital malformation of the valves is rather rare. The causes of congenital cardiac disease are not definitely known. It occurs in first-born children more often than in later ones. It is often associated with other forms of imperfect development, as Mongolian idio-

cy. An attempt has been made to connect cardiac malformations as a whole to syphilis, but a syphilitic history is seldom found. There is no evidence that rheumatism is the cause. Fetal endocarditis has been blamed as a cause but it attacks the right side of heart usually. In congenital aortic regurgitation one or more of the valve leaflets may be absent, or more commonly fused together, usually those behind which the coronary arteries are given off. Stenosis is much more common than insufficiency. In a series of 242 cases of congenital heart lesions collected from literature, aortic insufficiency was found only once.

Aortic regurgitation may be the result of endocarditis; the result of rheumatism; diphtheria and influenza, or other infectious diseases. However, endocarditis the result of these diseases and especially rheumatism affects the mitral valves usually. When aortic regurgitation develops in a rheumatic heart it does so almost invariably as a sequel or extension from a mitral valve. Primary rheumatic aortic insufficiency can occur without an associate mitral lesion, but it is a very rare event.

Usually when aortic regurgitation is rheumatic in origin it is the sequel or follows mitral regurgitation and mitral stenosis, the three conditions being present at the same time. When this is the case the aortic insufficiency is atypical and does not present the classical symptoms as when of syphilitic origin. Rheumatic aortic insufficiency occurs usually in those under middle age. In the series of cases from Roper Hospital 8 patients gave a rheumatic history and in 6 of these there were associated mitral lesions.

Syphilis is probably the most important cause of aortic insufficiency especially in the young and middle aged. Aortic insufficiency when caused by syphilis is often unassociated with widespread arterio-sclerotic changes. A pure mitral lesion is seldom if ever the result of syphilis. The spirochetes seem to have a

predilection for the aorta at the ascending portion, though they often attack other portions of the aorta and indeed any vessels in the body, especially the cerebral vessels. However, syphilis can and does attack the heart muscle producing a syphilitic myocarditis. The effect of syphilitic infection on the aorta is one of dilatation. The aortic arch is widened, producing a weakening of the aortic wall with subsequent stretching. The dilatation may be slight or it may be great enough to be called an aneurysm. It is now generally conceded that nearly all aneurysms are syphilitic in origin. When the first part of the aorta is affected by the spirochetes they generally also invade the aortic valves, and when they do they produce dilatation of them also. The result is an aortic insufficiency. Some claim that there is no such thing as syphilitic aortic stenosis.

In aneurysm of the ascending arch there is almost always an aortic insufficiency. The Wasserman test is very valuable in arriving at the cause of an aortic insufficiency. Of the 63 cases in Roper Hospital there were recorded 21 positive Wasserman tests and 6 negatives. In 36 of the cases no mention was made of the test. About 80 percent of those having positive Wassermans were under 40 years of age, and many were under the age of 30. Those showing negative Wassermans were generally above the age of 50.

A common cause of aortic insufficiency is a slow, progressive sclerosis of the segments, resulting in a curling of the edges. It may or may not be associated with generalized arterio-sclerosis but usually is. The arch of the aorta is affected along with the valves and the result is a more or less narrowing of the orifices of the coronary arteries. In fact, the most frequent seat of arterio-sclerosis is the arch of the aorta and the coronary arteries. There are two main forms of arterio-sclerosis recognized, the circumscribed and the diffuse. The circumscribed form is the form in which

atheroma of the arch is usually found. It occurs in a much younger class of patients. Aneurysm is more common in this form from liquefaction of the atheromatous plaques. In the diffuse form the same morbid process is found, but the diseased condition is found scattered throughout the arterial system. Dilatation of the aorta and its branches from the circumscribed form commonly coexists. The diffuse form is found most frequently in strongly built, middle-aged men and in the aged. The general causes of arterio-sclerosis may be classified: (1) Biologic irritants, as the specific micro-organisms of malaria and diphtheria. (2) Exogenous and endogenous toxins as chronic alcoholism, lead poisoning, gout, diabetes and obesity. (3) Chronic Nephritis especially the interstitial type. Bright's disease is occasionally the cause of arterio-sclerosis but the latter is usually the cause of the former. However, the two diseases may develop independently and yet simultaneously, in consequence of the action of a common cause. (4) Age, excesses in eating and drinking, worry and grief, and muscular overstrain, which increases the blood pressure, are put down as causes of arterio-sclerosis. The result is the same and cannot be differentiated histologically in most cases. In the series of 63 cases of aortic insufficiency that occurred in Roper Hospital there were 36 in which the arteries were sclerosed; in 26 the condition of the arteries was not recorded; in only one case were the arteries normal or so mentioned as being. No differentiation was made as to what arteries were sclerosed but the usual arteries considered are the brachials. A number of these cases of arterio-sclerosis also suffered from syphilis which probably caused the arterio-sclerosis. 14.5 percent of the total cases showed nephritis, the majority being among those also sclerotic. A sharp differentiation as to cause was not possible from the hospital records in the vast majority of cases. Not all cases of arterio-sclerosis

develop aortic insufficiency, but it is certainly a predisposing factor.

Aortic insufficiency may be produced by rupture of a segment, a very rare event in valves already the seat of disease. Sudden severe muscular effort is the cause of rupture of the valve usually.

Relative insufficiency, due to dilatation of the aortic ring and adjacent arch is not very common except in arterio-sclerosis and aneurysm of the arch of the aorta. As a result of myocarditis and conditions wherein the aortic orifice is enlarged there may be a relative insufficiency because the normal valves fail to effect complete closure. (to be continued)

SACRAL ANAESTHESIA

By James J. Ravenel, M. D., Charleston, S. C.

To Cathelin belongs the credit for first demonstrating the feasibility of producing local anaesthesia by extra-dural injection through the hiatus sacralis into the sacral canal. He used cocaine but was unable to produce satisfactory results in the human subject with safe quantities of this drug. Novocaine is now being used with little danger and excellent results.

Sacral anaesthesia has become a boon especially to the Urologist. The procedure is so simple and if properly done is practically devoid of danger. Anyone can acquire the technique.

I believe that it has not been more generally adopted by the profession because of the popular idea that it is a spinal anaesthesia. The dura ends near the second sacral vertebra and if the needle is not inserted to that level there will be little danger of piercing the membrane.

It is not really an anaesthesia, but an analgesia and consists merely of blocking the spinal nerves at their junction with the cord, covered with their membranes, and pass out of their various foramina of the sacrum. The injected solution is entirely extra-dural and does not enter the membranes of the cord.

The anterior primary divisions of the sacral and coccygeal nerves form the sacral and pudendal plexuses which furnish the nerve supply to the bladder, penis, scrotum and perineum. The scrotum and base of the penis also receive nerves from the ilioinguinal and genital branch of the genitofemoral which come from the first and second lumbar nerves.

Technique: The solution consists of:

Novocaine—.6 gms.

Sod. Bicard. (C. P.)—15 gms.

Sod. Chlor. (C. P.)—.1 gms.

Thirty cubic centimeters of sterile distilled water is brought to a boil in a sterile beaker and removed from the flame when the mixture in powder form is emptied into the beaker. The solution is allowed to cool and then six drops of adrenalin chloride solution 1-1000 is added. Now locate the sacral hiatus by finding the cornua on each side of it at the lower end of the sacrum. (This is facilitated by placing the patient prone on a table with a pillow under his hips; pass a finger along the spine from the coccyx up toward the sacrum and as the finger reaches the lower end of the sacrum the prominence of the cornuae will be felt on either side with a depression covered by an elastic membrane between them. After thus locating the hiatus, paint the area with iodine and infiltrate the skin with a few drops of the solution using a small hypodermic syringe. A sharp small calibre spinal needle is now passed at an angle of forty five degrees into the sacral canal precisely as you would do a spinal puncture. As the point passes through the sacro-coccygeal ligament it is evidenced by the characteristic sensation of a giving away to the pressure on the needle. The distal end of the needle is now depressed to the horizontal plane and pushed up the sacral canal for about four centimeters. If the needle is not held in the horizontal plane it's point may impinge on the anterior wall of the canal about two centimeters up and stop it's further progress. Another difficulty

may be that of an ossified sacro-coccygeal ligament which may prevent the entrance of the needle altogether, but this is rare. After the needle is once passed, the obturator is removed and the novocaine solution, 30 C. C. in bulk, is injected slowly taking about five minutes to complete the injection. There should be no resistance to the flow and should cause no reaction other than a sensation of fullness over the sacrum. The needle is withdrawn and the patient placed in a semi-reclining position for fifteen to twenty minutes; he is now ready for operation.

Dangers: If the needle has entered the dural sheath spinal fluid will escape through it upon removal of the stilet and in which event the needle should be withdrawn a little until the fluid ceases to escape when the injection may be made. Death has resulted from this accident when the novocaine solution was injected subdurally. Another danger lies in the entrance into a vein which is evidenced by the escape of blood from the needle when the stilet is removed. When this happens the needle should be rotated, withdrawn a little or passed a little higher up and washed out with a little sterile distilled water. When the blood ceases to escape it will be safe to proceed with the injection. If the injection is made into a vein immediately the patient shows signs of collapse and dyspnoea. This is why just a few cubic centimeters of the solution is first injected, wait a few moments to observe its effect upon the patient and if no reaction, proceed with the injection. Strychnia may be used should this reaction occur.

By placing the patient in the knee-chest position the anaesthetizing effect may be carried to a higher level.

Cystoscopy can be done very satisfactorily under sacral anaesthesia on those patients who because of an irritable bladder could not permit it otherwise. Likewise perineal sections, vasotomies, hydrocele operations, circumcisions, internal urethrotomies and even hemorrhoidectomies can be done.

Because of the simplicity and relative lack of danger when properly done, I believe this to be the anaesthesia of choice in the vast majority of operations upon the external genitalia and perineum, particularly in those patients who are poor surgical risks. The anaesthesia is complete and lasts for approximately an hour which gives one ample time to perform one of these simple surgical operations.

ABDOMINAL MIGRAINE

With report of a typical case. By Roy P. Finney, M. D., Gaffney, S. C.

The general advancement in education both literary and scientific during recent years has led to a voluminous literature on almost every subject, lay and professional. Especially has this been true in the realm of medicine, and it seems strange that a subject of such unusual interest as abdominal migraine should have been dealt with so sparsely. No text-book on general medicine or diseases of the stomach with which I am acquainted gives a lucid description of the condition though it is recognized to be fairly frequent. Perhaps it is because a diagnosis of abdominal migraine must be preceded by a most exhaustive examination in order that all abdominal pathology may be eliminated and the average patient is either financially unable or unwilling to go through such an examination. With regard to etiology of the condition very little is known. Buch believes it to be a neuralgia of the coeliac plexus and its branches; Mangelsdorf claims to have observed periodic dilatation of the stomach in most of his cases; others believe that gastric hypersecretion and hyperacidity play a part; still others place it in the overfull pigeonhole of defective or perverted metabolism. To me there is a striking similarity between abdominal migraine, gastralgia, hyperesthesia of the stomach, and cyclic vomiting. Certainly there are two things common to all

namely a history of neurotic parentage, and a very mobile and unstable nervous mechanism in the patient.

The symptomatology of abdominal migraine is quite uniform though not in every case distinctive. Usually there are premonitory symptoms consisting of anorexia, lethargy, and mild but persistent headache with a coated tongue and abdominal ill ease a train of symptoms generally called "biliousness" by the layman. Constipation may be present but seems to play no etiological part. Rather suddenly the patient passes from this state of general discomfort to one of distinct suffering. There may or may not be headache but in every true case of abdominal migraine there is severe abdominal pain usually located in the epigastrium but sometimes ill defined and diffuse. Marked prostration, nausea and vomiting frequently obtain and at first glance there appears to be some grave abdominal pathology. However the symptoms out do the signs and when one palpates he finds both recti muscles soft and relaxed with no distention or pain on deep pressure. Vomiting may be persistent and contain bile if there is much retching. An acute attack may last a few hours or two or three days and in my experience is not to be relieved by anything short of an opiate.

Brams of Chicago in a recent publication describes three types of the disease.

1. Epigastric pain as the predominating symptom either with or without headache.

2. Cephalic migraine predominating up to a certain time after which abdominal migraine appears and remains.

3. The so-called larval type in which headache and vomiting are intense but abdominal pain is not marked.

The latter seems to be the most frequent form and represents a transition from ordinary cephalic migraine to the abdominal type. The most striking case I have seen belongs to the first type.

J. J. C. white male age 40 was referred to me in September 1921 for diagnosis of per

iodic attacks of severe abdominal pain associated with headache and vomiting. Family history negative except that mother was of a nervous temperament and suffered for years with weekly "sick headaches."

Personal history uninteresting up to June 1913. At that time patient was taken suddenly ill with pain in epigastrium which began as dull ache and increased to sharp cutting pain. Vomiting occurred several times and gave temporary relief. The attack lasted about 12 hours and was relieved by Morphine. Subsequently other attacks occurred periodically at intervals of two to three months for three years when they became more frequent and were associated with a severe bitemporal headache. In March 1919 he consented to an exploratory laparotomy and a chronic appendix was removed. All other abdominal viscera were normal and were not disturbed. Following operation patient was relieved of attacks until October of the same year when they appeared with increased severity. Notes on examination made by me in September 1921 are as follows: "Patient well developed and well nourished weight 156 lbs. Pupils equal, regular, react to light and accommodation normally. Ears, nose, throat, teeth, negative. Lungs and heart negative. Inspection, palpation and percussion of abdomen reveals no abnormality. Reflexes normal. Romberg negative. Prostrate and rectum normal. B. P. systolic 135, diastolic 85. Gastric Examination.

Ewald test meal removed in one hour.

Amt. 105cc appearance normal.

Total acidity 68 degrees.

Free hydrochloric 53 degrees.

Benzidine test for occult blood negative.

Einhorns string test for ulcer negative.

Blood Examination:

Total erythrocytes—4,800,000.

Total leucocytes—7,000.

Haemoglobin—90 per cent.

Differential:

Polymorphonuclears—59 per cent.

Small mononuclears—32 per cent.

Large mononuclears—8 per cent.

Eosinophiles—1 per cent.

Wasserman negative to two examinations. Urinalysis showed no abnormality other than a positive test for indican. Fecal examination revealed no parasites or occult blood. On two occasions I performed a gall-bladder drainage by the Lyon-Meltzer method. The aspirated bile was normal in appearance and to microscopic examination. The Patient experienced no relief following these procedures.

Being impressed with the possibility of a periodic hyperacidity with pylorospasm I prescribed alkalis with tinct. Belladonnae fifteen minims three times a day up to point of tolerance. This treatment gave no relief and later during an acute attack I aspirated his empty stomach and obtained 30cc bile stained fluid with a total acidity of 32 degrees. Various therapeutic antimigraine measures have been used but the patient continues to experience his periodic attacks.

SOME OBSERVATIONS ON GASTRO-GENIC DIARRHEA

*By George M. Niles, Ph. G., M. D.,
Atlanta, Ga.*

The term diarrhea is usually applied to the too frequent discharge of more or less fluid stools, and may vary within wide limits. The personal equation must be considered, for while the majority of individuals secure one daily movement of semi-solid consistence, some consider themselves normal with two or three in twenty-four hours, and a very few evacuate the bowels only once in two or three days, seeming to suffer from it neither inconvenience nor impairment of health.

When, however, the peristalsis normal to the individual is hastened, when the stools become too frequent and too watery, and when relief is not obtained after the intestinal tract is thoroughly emptied it is neces-

sary to find the location giving rise to this abnormal condition.

The reader should be reminded that we are dealing with a canal which is lined with various forms of glandular epithelium and which has to perform functions of digestion, absorption, and elimination, while it is in direct communication with external agencies, some harmless, some beneficial, some dangerous. These functions being mutually complementary, a disorder in one promptly leads to disturbance in the others.

The etiologic factors concerned in the many forms of loose bowel movements will not be specifically considered here, except as they relate to disturbances of the stomach functions, and this diarrheal expression of faulty gastric digestion may be denominated gastronic diarrhea, or, as characterized by Einhorn and Oppler, diarrhea gastrica.

The fact that digestion of food-stuffs can proceed satisfactorily in the case of patients with increased or diminished, or even lost secretion of the gastric glands, and the fact that, under such conditions the bile, pancreatic juice, and succus entericus seem to take on an increased compensatory activity, permitting metabolism to continue almost normally, has caused many otherwise careful investigators to minimize the importance of gastric delinquencies upon an accelerated fecal current.

An acute lientery due to gastronomic excesses requires neither diagnostic acumen nor therapeutic skill in its recognition and management and need not be dwelt upon here.

There are, however, frequently coming under observation cases of chronic diarrhea, where intestinal parasites and all disturbing factors incident to the small and large intestine, including the auxiliary organs, have been thoroughly investigated, where hygienic dietetic, and medicinal measures have been intelligently invoked, but the loose bowel movements are not abated.

As in a number of instances of civic and corporate unrighteousness recently brought to

light, the chief aim of those concerned in the correction of the abuses was to get at "the man higher up", so we in our efforts to readjust a disquiet peristalsis, should likewise get at "the *organ* higher up," for in so doing often the key to the whole situation will be revealed.

Hemmeter uses these words in an article recently published: "Whenever there is chronic diarrhea, it is absolutely necessary to examine the stomach contents, even if the patients have no stomach symptoms."

Blackader of Montreal, stated recently: "More important, however, as an etiologic factor in the production of loose movements, is a faulty performance of gastric functions. Both defective secretion and defective motility favor fermentation in the gastric contents, and lead to the development of irritating organic acids and gases, and also to a great increase of bacterial growth. Hypersecretion with marked hyperacidity of the gastric contents may, by the discharge of extremely acid chyme into the duodenum, neutralize the normal alkalinity of the contents of the small intestine, and by so doing inhibit the action of the pancreatic enzymes, irritate the intestinal mucosa, and interfere with absorption."

In establishing the diagnosis of gastrogenic diarrhea, the first point to note is the history of present or past stomach symptoms.

Unless in an indirect manner, a hyperacid stomach will not cause diarrhea—on the contrary, constipation is usually present. My records for the past several years disclose only one instance of a chronic diarrhea, that could be fairly ascribed to a hyperchlorhydria.

In achylia gastric diarrhea is extremely common. Stockton noted 31 patients complaining of chronic diarrhea out of 115, and Woehnert, in analyzing the histories of 16 cases, found diarrhea in the majority. Vontabora observed typical diarrhea in twenty per cent. of his cases, while my own records approximate thirty per cent of diarrheal histories where there are found either

absence or marked diminution of gastric juice.

Subjectively, Kincaid remarks that this diarrhea is rather different from that due to primary intestinal disturbance, in that it occurs without straining and usually without pain, though there may be colicky pains, varying in severity with the size and character of the meal. Occasionally the bowels move several times in succession early in the morning, the stools being large and containing visible particles of undigested food. Also the desire to evacuate the bowels soon after a hearty meal is of frequent occurrence, the reason being apparent.

It has also been proved that in hypoacid conditions overgastric motility is the rule, and that the extra activity beginning in the stomach starts a wave which rapidly continues to the colon. This I have observed more often after breakfast.

Another fruitful source of gastrogenic diarrhea is found when, unchecked by the antiseptic power of free acid, the intestines are flooded by specific microbes from the stomach, completely overwhelming their normal flora. There is then set up, according to the composition of the nutritive soil, either an "intestinal putrefying dyspepsia", or, more often, an "intestinal fermentative dyspepsia."

Long continued gastric achylia may be followed by pancreatic achylia, producing "secondary insufficiency of the digestion of the small intestine." Under such conditions we find in the feces yeast, sarcinae, long bacilli, or flagellates, originated in the stomach and propagated in the intestines.

Barring that produced by intestinal parasites, the most important information concerning the etiology of practically every form of chronic diarrhea is obtained by a painstaking examination of the stools after the Schmidt-Strasburger test diet, and while it demands some care and attention to detail, the data gained is nearly always amply worth the trouble entailed.

This test diet in its simplest method con-

sists of the following: Morning, coffee, tea or cocoa with much milk, oatmeal with milk, a soft boiled egg, a roll with much butter. Noon, bouillon, if desired, four ounces of lean minced beef roasted in butter, half raw inside, a whole plate of finely mashed potatoes, tea with milk, a roll with butter. Evening, oatmeal with plenty of milk, one or two eggs cooked in any desired way, or roast veal if preferred, a roll with butter and tea with milk.

This should be kept up for about three days, and the stool then be examined microscopically. The presence of undigested connective tissue, especially if there is much of it, is nearly always sufficient to name the stomach as the culprit.

C. A. Aaron claims, and I believe correctly, that of all the digestive secretions, the stomach juice alone can digest raw connective tissue.

Very occasionally there is a hypoacid stomach that seems capable of digesting this tissue, and on the other hand there are hyperacid ones that seem inadequate to the task, but such rare exceptions need not militate against the value of this test, for in such instances there will be other indications pointing to a defective gastric performance.

Another test for the activity of stomach digestion is the desmoid-test of Sahli. This test consists of tying a small rubber bag filled with methylene-blue with a thread of catgut. This bag is swallowed with the noon meal, and if within twenty hours the urine turns blue, the stomach is doing fair work, for catgut is another substance only amenable to solution in the stomach, he believes.

Having become satisfied that a chronic diarrhea is of a gastrogenic nature, the treatment naturally focuses on the stomach, though irritative states of the intestines, concomitant or secondary, must not be neglected.

In cases of achylia gastric or hypoacidity, HCl is the sheet anchor in the treatment,

and may be given alone or with pepsin. While we can not hope to supply enough of either of these agents to carry on normal digestion, we usually get prompt and satisfactory results, not only in gastric but also intestinal digestion. In a few days the connective tissue disappears from the stools along with a marked amelioration of the diarrhea.

I have noted, as well as others, an occasional achylic stomach that seemed intolerant of HCl, and this idiosyncrasy must be respected when met.

In addition nux vomica, condurango, or orexin before meals will often wake up a sluggish gastric mucosa, and be followed by a satisfactory secretion.

Dietetic regulation is of course highly important. Meats should be soft, tender, well cooked and well divided, and as free as possible from connective tissue. Foods containing an excess of cellulose should be avoided and the well cooked or mashed vegetables and fruits allowed. Especially well borne are the vegetable purees, as those of peas and beans.

Should the teeth be bad, they should be put in order, as good mastication is a *sine qua non* in the management of these conditions.

Artificially soured milk, or lacteal champagne, generally agrees better than sweet milk, not being so prone to set up flatulence. The latter when used, is best peptonized.

Lavage of the stomach holds a valuable place in the treatment of chronic diarrhea, even in instances where the proof is not clear as to its gastric origin. We sometimes encounter cases, which for want of a better term, are designated "chronic dyspeptic diarrheas" and where a lavage containing nitrate of silver or salicylic acid give almost spectacular results.

If antiseptic treatment of the stomach is indicated, as in dilatation of the stomach-atonie type—with fermentation and motor insufficiency, or stenotic type, with fermentation, motor insufficiency, and gastritis, boracic acid, sodium salicylate, thymol, creolin, lysol, or ichthyol, in average strength (about 1:1000) may be employed to advantage. When these medicated douches are used, however, it is well to use a mild saline solution first, then the medicated fluid, then conclude with plain water.

I might fitly add that in every chronic diarrhea, whether from intestinal irritation, from pathogenic bacteria or protozoa, from defects of intestinal absorption or secretion, or even from hurried peristalsis due to impulses received from the large nervous centers in the cord and cerebrum, intelligent investigation of the stomach activity, with proper hygienic and therapeutic measures directed to that such abused viscus, will in a vast majority of instances yield results entirely commensurate with the time and thought thereon expended.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

The thyro-toxic goiter is far and away the most serious risk, surgically, of all the types of strumous pathology.

The non-toxic adenomatous goiter is perhaps the least risk from a surgical standpoint as regards life.

The term thyrotoxic is one applied to an adenomatous goiter, not hyperplastic, yet toxic. There is little, if any, hyperplasia, yet there is eliminated from the substance of the gland and its pathological cells a toxic substance which is slowly, yet continuously absorbed, and which seems to have a special predilection for the cardio-vascular and renal tissues.

The toxic symptoms are superimposed on an adenomatous goiter of long standing. Generally speaking, an adenomatous goiter becomes toxic to a greater or less extent at the end of fourteen years and two months from the time the adenoma was first detected.

The blood pressure slowly rises, there is an increase in the hardness of the blood vessel walls, principally a sclerosis of the arteries, both peripheral and coronary. The myocardial fibers degenerate in time and this produces an irregular heart action.

As the cardiac function and compensation slowly fail, an increasing dyspnoea and fatigue ensues. The respiratory rate increases, and their excursions become more shallow.

The patient complains of forcible heart action and states that it seems as if the heart will jump out the chest wall. This forcibleness is transitory. They suffer with hot flashes, often of such frequent recurrence as to be most bothersome. During these flashes the close examiner will not infrequently detect a marked erythema of certain parts of the body, especially of the skin

covering the anterior aspect of the neck and the upper chest. This may be so pronounced as to produce a real pink or scarlet hue.

Careful kidney study reveals a scantiness in urinary output, an albuminuria, usually with casts, hyaline and granular predominating, and the total qualitative urinary output determined by the phenolphthalein technique will be found to be decreased.

In addition there is a disturbance of the patient's mental equilibrium, which increases as the disease advances. Their usual quiet, gentleness, and affability fades slowly into general irritability, and they become easily upset by the least noise or unpleasant occurrence, they anger quickly and frequently this sudden anger provokes a mental explosion, as well as an acute sudden elevation of blood pressure with tachycardia, a very irregular pulse, and a fleeting delirium; e. g. they go into a regular paroxysm, from which several hours of extreme quiet with the administration of anodynes are necessary to return the individual to something approximating their natural temperament and cardio-vascular action as well as blood pressure.

Individuals with thyrotoxic goiter who run a natural blood pressure of 180 to 190 systolic, when upset mentally, often will show a blood pressure of from 30 to 50 points in excess of this.

Dizziness, vertigo, headache, and spots before the eyes are other symptoms of which thyrotoxic patients complain. At times they are so nervous, as to lack sufficient self control to permit of a physical examination by the consulting surgeon to whom they have been referred by their family physician.

An experienced goiter surgeon approaches this type of case with a certain degree of fear. He hesitates to advise operation, for he has found from experience, that even when they have been thoroughly studied and carefully prepared, with intensive preoperative treatment, and that apparently when they look as if they will go through the procedure safely, that once in a while, he will find one that suddenly goes bad on the

operating table, or who going through the operation nicely, is returned to his or her bed in very good condition, only to suddenly go to pieces at some time during the next twenty-four hours and succumb in a very short while, as result of acute cardiac failure.

Truly, these are, of all types of goiter cases, the most serious, as regards operability.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

The importance of a Differential Diagnosis in Cases of Renal Colic.

The pain of an attack of renal colic may vary from that of a slight discomfort to one of an agonizing character, uncontrollable with morphia. The typical and usual attack begins in the region of the kidney, extends down the course of the ureter toward the bladder, and may extend to the testicle, ovary or ileum. Occasionally, it extends from the kidney to the shoulder blade or across to the opposite kidney. It may last from a few minutes to many hours, and may occur daily, monthly or at intervals of years.

Some cases present only a dull ache over the kidney or ureter. These fixed pains are often taken for lumbago, appendicular colic, gall-stones, pelvic disease and many other intra-abdominal conditions.

There are many pathological conditions that may cause attacks of kidney colic and there is nothing about the character, severity location or duration of an attack of renal colic to indicate the underlying pathological condition. The most common causes are pyelitis, stricture of the ureter, stone in the kidney or ureter, twist or angulation of the ureter, hydronephrosis, pyonephrosis, essential hematuria, tuberculosis of the kidney,

tumor of the kidney or ureter, tumor of the bladder situated at the ureteral orifice, tumors pressing on the ureter, such as the pregnant uterus and other enlargements in the female pelvis. Prostatic enlargement or other forms of vesical obstruction, such as tumor at the vesical orifice, median bar, contracture of the vesical neck, spinal cord lesion; also obstructions of the urethra, such as stricture, may produce renal pain.

Renal colic is one of the most common conditions that the physician is called upon to treat and it is of the utmost importance to make a correct diagnosis of the underlying pathological condition. Anything short of this carries with it a great peril to the future integrity of the kidney involved, and to the future general health and life of the patient. Without a thorough urological examination, it is nothing but a bold guess to make a correct diagnosis of the underlying cause in a case of kidney colic. Calculus is a common cause, but does not occur as often as is generally thought. Pain in the side with blood in the urine is thought by some to mean that a stone is present, but the same things occur in many of the other above mentioned conditions.

A pyelitis, with an accompanying ureteritis, probably accounts for at least as many

cases of renal colic as does calculus. Stricture of the ureter or an angulation, frequently, is the only thing to bring on attacks. Tumor of the bladder, when situated at the ureteral orifice, causes severe and typical paroxysms. Blood clots from renal tuberculosis, tumor of the kidney or ureter, essential hematuria and nephritis, or desquamated cells from inflammatory lesions of the kidney may cause temporary ureteral obstruction and colics may follow.

It is important to know that the clinical history, with general examination of the patient for temperature, pulse, blood pressure etc., and a urinalysis, will not often reveal the cause of the colic. Therefore, besides these examinations, a thorough examination with the cystoscope, ureteral

catheter, estimation of the functional activity and examination of urine of each kidney separately, X-ray with pyelograms and ureterograms should be made.

After the diagnosis is established, proper treatment should be instituted. If this is not done, in many cases, the kidney's integrity will be impaired or the organ may be finally destroyed. All of this may take place without any further subjective symptoms. Not more than 50 per cent of calculi produce colic; many cases of pyelitis do not cause subjective symptoms; tumor and tuberculosis of the kidney and other lesions are often without symptoms for a long time, but surely bring about damage that may be irreparable and end in death of the patient or require radical treatment.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
Medical College of the State of South Carolina,
Charleston, S. C.

CHRONIC PERITONITIS

Chronic peritonitis is a far more common affection than is generally realized. It was almost invariably a sequel to operative procedure. It commonly follows after the termination of acute inflammations of the peritoneum, and especially after localized lesions.

Chronic peritonitis manifests itself either as a thickening of the peritoneal sac, as fibrous tissue adhesions, or as a combination of these two. In the former there is a simple new fibrous development in the basement membrane which supports the endothelial lining cells of the peritoneum. There are not only results a thickening but commonly puckering or wrinkling of the sac. This type is noted chiefly as a localized process although it may be general.

In chronic peritonitis where adhesions are the prominent symptoms it most fre-

quently follows a localized acute process. As the acute stage subsides, new fibrous tissue develops between the peritoneal sac and the adjacent organs and structures. Adhesions of this type are very common following abdominal operations where handling of the viscera and peritoneum excites a reaction sufficient to eventually result in their development. Fortunately, adhesions from operative procedure are rapidly becoming something of the past because of the modern refinements of operative technique.

Often adhesions in the peritoneal sac are not primarily of the peritoneum. They frequently develop over certain diseased organs, notably in cirrheses of the liver, and in certain splenic affections. These adhesions may distort organs or act as bands to contract the intestines, under which circumstances intestinal obstruction may arise. When adhesions are numerous, peristalsis is impeded and obstinate constipation is com-

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

X-RAY IN DERMATOLOGY

Value of Roentgen Therapy in Dermatology, George M. MacKee, M. D.

The Roentgen-Ray treatment of Diseases of the Skin, H.H. Hazen, M. D.

The American Journal Roentgenology, April 1922.

These two papers were read before the twenty-second annual meeting of the American Roentgen-Ray Society in Washington, D. C., September 27-30, 1921. Dr. MacKee enumerated over eighty different skin diseases that were amenable to the X-ray treatment and stated that the roentgen-rays constituted the most useful and successful single remedy we possessed for the treatment of dermatological diseases. He divided skin diseases into thirteen groups in order to show the relative susceptibility to the roentgen-ray and other methods of treatment. Two of these groups consists of important conditions in which irradiation constitutes the only means of establishing a permanent cure with a reasonable degree of certainty. In the other groups the roentgen-ray is claimed to be superior over any other method of treatment in the majority of instances. He does not advocate the roentgen-ray in all instances to the exclusion of the

many other well established forms of treatment.

The X-ray considered far superior to Radium in dermato-therapy even though they both have in a general way the same effect. They can be employed for the treatment of diseases that cover extensive surfaces and the dosage can be measured more accurately than with radium. Dr. Hazen's paper dealt exclusively with the technique and results obtained in individual diseases. The dosage was measured by MacKee's arithmetical formula and he believes that the unfiltered ray is superior to the filtered ray in dermatotherapy.

Under the heading of superficial malignancy he reports 147 basal celled cancers treated with a failure in 15 instances. Six of the latter were considered hopeless from the beginning. He discussed in detail many other conditions of the skin that are treated effacaciously by the roentgen-rays and concludes that roentgen-rays are probably the most useful single therapeutic agent that the dermatologist possesses today. It is of the greatest value in both malignant and benign tumors,; keratoses, warts, eczema, acne, lichen, planus, some forms of tuberculosis, sycosis and folliculitis of the back of the neck, tinea tonsurans, tinea barbae, some cases of pruritus, granuloma annulare and mycosis fungoides.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

RURAL SANITATION

The annual meeting of the County Health Officials Association met at Charleston July 3rd, 1922.

At this meeting which was attended by all the full time County Health Officers of this State and their assistants, various practical methods of correcting the many unsanitary conditions that exist in the rural districts of South Carolina were discussed.

These meetings, while not very large, are very important from a public health standpoint; because here plans are formulated and ideas fostered that will eventually revolutionize methods of living in the isolated rural home.

While at first thought, it would seem that the County would be far healthier to live in than the over-crowded city, nevertheless our vital statistics demonstrate the fact that the plans of Nature have been reversed in favor of the municipality; and as a rule the more highly organized the city, the lower is its morbidity and mortality rates.

The rural districts therefore, are much more in need of sanitation than the city; and it is entirely due to this need that the Rural Sanitarian has entered the field of Preventive Medicine, and through the medium of the County Health Department, is teaching principles of disease prevention to the residents of the isolated farmhouse and the children who attend the little red school house near the farm.

Rural Sanitation endeavors to prevent all of the diseases that are preventable, but it especially concerns itself with the filth-borne diseases—notably typhoid fever, hookworm disease and the diarrheas.

While the organized community has its

municipally maintained water supply and sewerage system, the isolated farm house has to provide its own source of water, and devise its own method of excreta disposal.

Heretofore, it was customary for the average farmer to dig an ordinary hole in the ground for his water supply, and to put up a rough privy building, to afford a little privacy during the act of defecation or urination.

A number of sanitary surveys made during the past few years—notably those made by the U. S. Public Health Service, and the Rockefeller Foundation through its International Health Board—have emphasized the fact that a hole in the ground is not a fit source of a water supply, and that the unsanitary privy is one of the most frequent causes of Typhoid Fever and Hookworm disease.

Some of these surveys have been followed by demonstrations tending to prove beyond doubt, that by improving the water supply of the farm, and by replacing the unsanitary privy with a fly-proof latrine, Typhoid fever and Hookworm disease can be absolutely controlled.

Some of the results in rural sanitation have been so striking, that County Health Departments have been created in a great many sections, with a view to controlling the prevalence of diseases in the rural districts.

Considering the fact that Rural Sanitation is comparatively recent, and that the first County Health Department in South Carolina was organized just a few years ago, it seems very natural that those engaged in this work should be anxious to exchange views and compare methods of procedure in a work that requires sailing over uncharted seas.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
Superintendent State Training School,
Clinton, S. C.

GENERAL PARALYSIS

Since the causes of this disease are distinctly of venereal origin, it may seem that the writer is trespassing upon the subject of some other department. But we shall try not to discuss the venereal symptoms of this disease, and shall take only enough time to say that it is now pretty generally conceded that general paresis is caused only by previous syphilitic infection. The admirable plan of so many physicians who are now having Wassermans done almost as a routine examination, and the experience gained by years of treatment of the disease should certainly diminish very greatly the number of cases of G. P., and we confidently expect to see a much smaller percentage of these cases committed to our State Hospital after one or two decades. The important thing that we wish to emphasize is that the physician should, whenever possible, make a diagnosis of syphilitic infection before any of the remotest symptoms of G. P. can be observed. It is fairly well known that the disease will almost always progress to a fatal termination after symptoms of paralysis appear.

By keeping in mind the importance of mental symptoms a physician may detect irritability, gradual memory defect, moral obtuseness, poor judgment, and indications of an impending nervous breakdown in time to institute treatment that will save his patient from certain and early destruction. So

many cases of paresis are diagnosed in what are considered the second or third physical stages of the disease that the sentence to be laid upon them is three to five years of depraved and horrible living. And so we are practically forced to say that the treatment of paresis avails nothing more than a possible remission of the disease and a negligible prolongation of an ignominious life. Diagnoses of paresis which are based upon the changes in reflexes, pupillary signs, Rhomberg's sign, speech disorders, etc., in the majority of cases amounts to nothing more than the ability to tell the relatives and friends something that they will find out themselves by waiting a short time.

After it can be determined by laboratory methods that the disease has reached the spinal fluid, it is not usually controllable. The procedure for withdrawing blood from a vein and having examination made is so simple and easy that we should rely almost entirely upon blood examination in the absence of reliable history or definite lesions. It is said that occasionally the spinal fluid may be positive and the blood negative. The only successful treatment of paresis is the treatment that prevents it. Too heroic treatment after physical signs appear may possibly do harm.

Paresis occurs in a comparatively small per cent of syphilitics, but every case of infection should be regarded as a possible or probable case of general paralysis.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

POLIOMYELITIS. — Diagnosis, Prognosis and Early Treatment. By Dr. Robert W. Lovett, Boston. *Journal A. M. A.*, May 27th, 1922.

Based upon study of 5,100 cases of Infantile Paralysis, Dr. Lovett gives the following data:

The history is not of diagnostic value, as typical cases may occur without evidences of systematic disturbance such as fever, respiratory or digestive upset. The disease may follow other diseases such as typhoid fever, trauma, confinement, chill or infectious disease.

Stiffness at the back of the neck in attempts to flex the head is a very suspicious symptom but not characteristic. Tenderness of the parts to be affected occurs early. Paralysis, as a rule, occurs in from one to two hours up to three or four days of onset, is erratically situated, and in practically all cases is accompanied by marked tenderness and even pain. This tenderness is an important symptom in diagnosis. Retention of normal sensations is an important symptom, as is also weakened, or lost, reflexes in the affected parts.

The paralysis is more often partial than complete because all of the muscles of a limb are not as a rule affected.

Therefore, a wide spread loss of motor power (partial or complete), with weakened or lost reflexes, but undisturbed, normal sensation, constitute the three points upon which the diagnosis mostly depends.

In very young children it is often difficult to ascertain that sensation is impaired and this makes a diagnosis at this age uncertain.

Prognosis: At first little if anything can be told as to outcome. Increase of the paralysis for several days after its onset is a

bad prognostic. Average duration of tenderness is about six weeks, and a prolonged tender stage usually means a severe case. Rapid disappearance of tenderness is favorable.

About 25 per cent of cases in the average epidemic completely recover. All who live through the acute attack improve, and involvement of all the extremities in the initial paralysis does not mean that complete recovery may not take place.

Respiratory paralysis is the usual cause of death and for this reason paralysis of the upper half of the body is less favorable as to life than paralysis of the lower half of the body.

Improvement begins as soon as all tenderness disappears, but no one can say how far towards full recovery this will go, and usually it only goes part way. The only hopeless cases are those in which permanent paralysis of both arms and both legs occurs, the others can be made to walk.

Treatment: The early treatment is all important, and the great advances made have consisted in our knowing that the former therapeutics at this early stage were directly harmful.

Drugs are of no value. Neither the use of blood serum or recovered patients, nor Rosenow's serum can be regarded as proven to have been beneficial, even in the earliest stages. Electricity, massage, and any attempts to move the paralysed parts are harmful. As soon as the diagnosis is made the patient should be kept perfectly quiet, not only physically but mentally, because in every case there is some involvement of the cerebral meninges. This quiet should be maintained until all tenderness is gone. If the tenderness is extreme, no efforts to

maintain correct positions should be made, the patient should be allowed to assume the position of least discomfort, if necessary for weeks. In this delay there is no danger of ankylosis, or of serious irremediable muscular atrophy.

Inability to cough audibly is a sign of importance and points to respiratory involvement. Such patients should not be kept too long on their back and should be guarded against anything that will induce respiratory complications, such as very cold air. Such patients may die one or two months after the attack from respiratory complication.

If there is any involvement of the abdominal muscles, and over 70 per cent of all cases show such, an abdominal corset should be applied before sitting up is allowed. The outlook for recovery in the abdominal muscles is poor, paralysis here being more frequently permanent than in any other muscles of the body except those of the lower leg.

As after scarlet fever or diphtheria watch out for general sepsis and prevent same through maintenance of nourishment and fresh air supply throughout the attack. (For this same reason is it safe practice to start such drugs as chloral, for their quieting effect, early in an attack? Edit.)

The acute stage ends when all tenderness has disappeared, and now a complete and detailed examination of every muscle in the body should be made to determine its relative strength or weakness.

Electricity does not increase muscular strength, and heavy massage causes muscular wasting and cannot be regarded as restoring of muscular power. It simply is a measure to improve circulation, nutrition and muscle tone. Weight bearing exercises, such as walking to any extent in the first year after infantile paralysis, is attended with risk and is followed in many instances by a change from partial to total paralysis. Over use of a muscle is probably worse than its disuse.

Muscle training forms the basis of the modern treatment of Poliomyelitis. This should be done only by one who understands just what he is trying to accomplish, else he will encourage the patient to exercise the opposing strong muscles instead of the weakened ones, and thereby make the muscular imbalance worse instead of better.

From the above it would appear that our best service, and our duty, to the child with infantile paralysis would be to explain carefully to the parents just why treatment should *not* be instituted in the first stage, and show them how it actually will do harm so that they will be satisfied with the "watchful waiting" attitude until the acute stage is over. Then the patient should be taken to an expert Orthopedist who is thoroughly equipped to efficiently handle the case throughout the long convalescent stage. Only so can the flail and distorted limbs be prevented, and what is a year out of life at this age, devoted to such care, compared to the balance of its life a cripple? Dare we assume such a responsibility?

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

HAY FEVER

Among the diseases which cause the greatest suffering and inconveniences without danger of death, hay fever as it is commonly known, is certainly serious and common enough to command our attention. Its incidents is variously estimated. Perhaps a conservative estimate would be to place its relative frequency at one per cent, that is, in the United States then there would be about 1,000,000 cases.

In this particular locality the most frequent cause of the disease is Ragweed, both giant and small type (*Ambrosia*, *elator* and *trifida*). The minor causes of the disease are cockle burs (*Speces Zanthium*), horse weed (*Erigeron canadensis*) and marsh elder (*Iva imbricata*). The season begins August 18th and ends about October 10th.

The pollens which are wind born are the greatest offenders. Though the pollen of corn (*Zae mays*) is wind born, the size of the pollen prevents it from being of any great significance except to those who are in close contact. Golden rod (*Solidago*) though frequently associated with the disease, is rarely a causative factor unless inhaled at close proximity. The pollen is only produced in moderate amounts and is insect born.

The diagnosis of the disease is usually made by the patient. It remains for the doctor, however, to distinguish which pollen is the principal causative factor. This is usually determined by cutaneous tests of the pollen extracts of the plants mentioned above.

Prophylaxis: An attempt should be made to cut down the offending plants adjacent to one's abode. The avoidance of dust, wind and riding over roads the sides of which are infested with hay fever plants. Or, better still, one may prevent the disease by moving to an altitude of over 5,000 feet and remaining there until the season is over, since the offending plants rarely occur at such altitude.

Treatment: The only treatment of any particular value is that accomplished by immunization with pollen extracts. Immunizing doses should be started about six weeks before the season begins. Beginning with very small doses, gradually increasing to the maximum dose, the day the season opens. These immunizing doses should be continued throughout the season at weekly or five-day intervals since it is necessary to keep the immunization at a high level, during the period of pollination. Smaller doses, however, should be used during this stage, since the patients are themselves taking up pollens.

SOCIETY REPORTS

ANDERSON COUNTY

Date of meeting July 12, 1922. President L. W. Milford in chair. Roll call, number present 14: Minutes read and approved. Dr. S. C. Dean read a paper on "Intussusception: Report of Cases."

Dr. C. H. Burton gave a report of his observations while at the Lying-in Hospital, N. Y. for a post-graduate course in June.

G. S. CLINKSCALES, M. D.,
Secretary.

MARLBORO COUNTY

Date of meeting July 6, 1922 at Bennettsville. President Douglas Jennings Jr., in chair.

Roll call, number present 13, including visitors. Minutes read and approved.

A paper on Gall-Bladder Disease was read by Dr. A. Johnson Buist, Charleston. Dr. Buist's paper was very interesting and instructive and was freely discussed. Those engaging in the discussion being Drs. May, D. D. Strauss, Mahoney, J. F. Kinney, Smith, Jennings and Buist. Two cases of Calcium Arsenate poisoning were reported. One, a man was poisoned from dusting cotton with Calcium Arsenate; the other, a child, was poisoned by eating Black strap molasses with the boll weevil poison in it. Both cases recovered.

Most of our members are very much interested in their county medical society and the attendance at the meetings is usually good. We hope to add several new members to our rolls in the near future. The society meets the first Thursday in each month.

D. D. STRAUSS, M. D., Secretary.

Whereas: since our last meeting, God in His wise Providence, has seen fit to remove from his sphere of earthly usefulness J. H. Reese, M. D., and whereas, in the death of Dr. Reese the Marlboro County Medical Society has lost one of its oldest and most loyal members, therefore, be it

Resolved, that we extend our heartfelt sympathy to the family of our late brother in their bereavement, and

Resolved further, that our Secretary be instructed to send a copy of these resolutions to

the family of Dr. Reese, that they be printed in the Pee Dee Advocate and the Journal of the South Carolina Medical Association, and that a page in the minute book of the Society be suitably inscribed to the memory of Dr. Reese.

DOUGLAS JENNINGS, JR., President.
D. D. STRAUSS, Secretary.

Marlboro County Medical Society.

CHEROKEE COUNTY

Date of meeting, Monday, May 1, 1922. President J. B. Hughey in chair. Roll call, number present 5; number on roll 9. Minutes read and approved. A paper was scheduled but the doctor failed to respond. A general round-table discussion of summer diarrhoea was enjoyed by everybody present. Dr. S. B. Sherard, delegate to the Rock Hill meeting of the State Medical Society, gave an interesting exposition of the proceedings of that meeting.

ROY P. FINNEY, Secretary.

BARNWELL COUNTY

Date of meeting May 17, 1922. President A. S. Blanchard in chair. Minutes read and approved.

The following papers were read: Complementary Infant Feeding, by Dr. W. A. Mulherin of Augusta, Ga., and Acute Abdomen, by Dr. W. W. Battey of Augusta, Ga.

The Society was entertained at Dr. J. L. Smith's Swimming and served with a Fish and Barbecue Dinner.

W. CONE, Secretary.

PICKENS COUNTY

Date of meeting, June 7, 1922. President L. G. Clayton in chair. Roll call, number present 9; number on roll 23. Minutes read and approved. The following papers were read: Embolism and Thrombosis by Dr. W. A. Sheldon, and Antointoxication by Dr. J. C. Pepper. Both subjects were fully discussed.

Clinical Cases were reported by Drs. Valley, Griffin, W. A. Tripp and Bolt. Two of these cases were rather sudden deaths and in neither could the cause be definitely determined. An autopsy in each case could have cleared

the mystery. They should have been held but we could not do it without the consent of all relatives and friends whom we did not have the time to see.

We had a good meeting and our next will be on July 12th instead of the 5th which would be our regular meeting day. We are always glad to have visitors at our meetings and our regular meeting place is Easley.

J. L. BOLT, Secretary.

LAURENS COUNTY

Date of meeting May 29th, President W. T. Pace in chair. Roll call, number present 11; number on roll 21. Minutes read and approved.

Dr. R. E. Hughes read a very interesting paper on Tonsils a focal infection in relation to Rheumatism, which was thoroughly discussed by all present.

Dr. B. O. Whitten made a report of the State Medical Meeting.

J. W. BEASON, Secretary.

WILLIAMSBURG COUNTY

Date of meeting June 8, 1922. President W. G. Gamble in chair. Roll call, number present 5; number on roll 12. Minutes read and approved.

Dr. W. C. Rogers read a paper on "The Physician and his Patient." In this article Dr. Rogers emphasized the importance of gentility and frankness characterising the demeanor of the physician toward his patient and zealously advocated, at all times, a painstaking history and a thorough examination. And in return for such services the physician is justifiable in imposing a legitimate fee, in which act he is doing, by far, less injury to his patient the measly sum of fifty cents, or perhaps a dollar, for the too-often practiced "Tongue and pulse examination."

Dr. Rogers' paper was favorably discussed by members present. On account of the temporary absence of the secretary, Miss Daisy Varn, of the local chapter, American Red Cross, and the inaccessibility of children during the summer holidays, the Clinic for Children, conducted jointly by the local chapter of the Red Cross and the Williamsburg County Medical Society, and held monthly in connection with the sessions of the medical society, will be discontinued until September. A committee composed of Drs. C. D. Jacobs, W. C. Rogers, and B. M. Montgomery was named by the chair to formulate appropriate

resolutions of respect to Dr. W. C. Hemingway, deceased.

The Society adjourned to meet again in August—the July session being omitted because of confliction of dates with the meeting of the Seventh District Medical Association, Kingstree, S. C., July 6, 1922.

B.M. MONTGOMERY, Secretary.

WILLIAMSBURG COUNTY

The Williamsburg County Medical Society, in session June 8, 1922, adopted resolutions as follows:

WHEREAS, an Allwise Providence has taken from our midst a brother physician, Dr. W. C. Hemingway, be it therefore

RESOLVED: First, that in his death the Williamsburg County Medical Society is conscious of the loss of one of its pioneer members; Second, that we extend to his immediate family our deepest and most sincere sympathy in their hour of bereavement; and

Third, that these resolutions be spread upon the minutes of our society, a copy sent the bereaved family, and a copy furnished our local press for publication.

Respectfully,

Williamsburg County Medical Society.

C. D. JACOBS,

W. C. ROGERS,

B. M. MONTGOMERY.

Committee.

SUMTER COUNTY

Date of meeting June 8, 1922. Dr. C. B. Epps in chair. Roll call, number present 12; number on roll 23. Minutes read and approved.

The following papers were read: Myoclonia by Dr. W. H. Burgess and Indicanuria by Dr. W. E. Mills.

The first paper was discussed by Drs. Stuckey, Shaw, H. A. Mood, and W. S. Burgess. This condition being a rare one proved of much interest to the members present. The writer was congratulated on the paper and requested to read it at the approaching meeting of the Seventh District Medical Association which is to meet in Kingstree July 8, 1922.

The second paper was discussed by Dr. Littlejohn. This paper was full of practical information especially to those familiar with laboratory tests and was greatly enjoyed by all present. Under the head of Clinical Cases, Dr. Weinberg reported a case of Papiloma of the orifice of the ureter which had been mis-

taken for calculus and had been treated for a year or more for same. The great importance of an examination by a specialist was clearly shown in this case. Dr. Stuckey reported a case of severe pain in the left abdomen of a small boy with sudden rise of temperature which was relieved in a few hours by a brisk cathartic. No diagnosis was made and the members present failed to throw any light on the subject. Dr. Lemmon reported a case of Calculus of small intestine which was relieved by a ride several miles to the Hospital in a Ford car, condition returned a week later, case dying without operation. Diagnosis made at autopsy.

Dr. H. A. Mood in speaking of acidosis with vomiting and serious diarrhoea where there were no fluids retained, bowels moving every few minutes, soda had been given until the child had a form of tetany, gave four drops of camph. tr. opium after every other bowel movement. The point being not to give a large dose of opium but just a few drops repeated often. He also advocated the giving of ten drops saturated solution sulphate of magnesia by hypo. This case was discussed by Drs. W. H. Burgess, Stuckey, and Littlejohn. Meeting adjourned for supper which was enjoyed even more than the papers.

H. L. SHAW, Secretary.

GREENVILLE COUNTY MEDICAL SOCIETY

Date of meeting June 5, 1922. President T. M. Davis in chair. Roll call, number present 65; number on roll 80. Minutes read and approved.

The following papers were read: Psycho-Analysis, by Dr. Bisch of Ashville, N. C., On Urology, by Dr. N. B. Edgerton of Columbia, S. C. Our meeting was held at the Imperial Hotel on the evening of June fifth. The Society was delighted to have the above gentlemen on the program. We had with us that night as guest of the Society Col. Dedman of the U. S. P. H. and Dr. Frank Lander. A delightful dinner was served and the meeting enjoyed.

The papers were especially good and the members entered into much discussion.

C. C. ARIAIL, Secretary.

SEVENTH DISTRICT ASSOCIATION

A most enthusiastic and successful meeting of the Seventh District Medical Association was held at Kingstree Thurs. July 6, in the Masonic hall. A moving picture theater was

utilized for the showing of lantern slides to illustrate certain of the lectures. The Seventh District comprises the counties of Clarendon, Georgetown, Lee, Sumter and Williamsburg. The meeting was attended by 41 medical men, representing each of these counties. An interesting program of scientific papers was presented. These led to lively discussions, entered into by many of those present. At dinner time the members drove out to the picturesque grove of the old Fulton home, where they were served fish stew and barbecue, prepared by the master hand of Mr. Jim Epps.

The Medical Associations of Clarendon and Lee extended invitations to the District Association to meet with them next year. It was decided to hold the 1923 meeting at Bishopville and the 1924 meeting at Manning. During the absence of the president, Dr. J. A. Mood of Sumter, the vice president from Williamsburg, Dr. E. T. Kelley, presided. Besides the invited guests who presented papers, the association was pleased to have as its guest Dr. C. F. Williams of Columbia, president of the State Medical Association, who made a short but interesting address. The officers elected for the ensuing year are as follows: Councilor (previously elected by the State Association), Dr. T. R. Littlejohn; president, Dr. E. T. Kelley of Kingstree; vice presidents, Clarendon, Dr. W. S. Harvin of Manning; Georgetown, Dr. W. M. Gaillard of Georgetown; Lee, Dr. A. H. Brown of Oswego; Sumter, Dr. H. A. Mood of Sumter; and Williamsburg, Dr. B. M. Montgomery of Kingstree; secretary-treasurer (elected in 1921 for three years), Dr. Carl B. Epps of Sumter.

After an invocation by the Rev. Mr. Ridout an address of welcome was made by Mayor William Scott. Then followed the program, which was as follows: "Examination of the Heart; (a) the Electro-Cardiograph," by Dr. J. H. Cannon of Charleston; (b) "The Roentgen Ray," by Dr. A. Robert Taft of Charleston; "Surgery of the Prostate," by Dr. G. Fleming McInnes of Charleston; "Hypertension," by Dr. T. R. Littlejohn of Sumter; "A Brief Review of Hookworm Infection in this Section," by Dr. T. C. Harper of Kingstree; "Myoclonia, with Case Reports," by Dr. W. H. Burgess of Sumter; "Is Goiter Surgery Giving Satisfaction?" by Dr. Carl B. Epps of Sumter; "Puerperal Infection, with Case Reports," by Dr. W. S. Burgess of Sumter; "Unrecognized

Glaucoma and the General Practitioner's Responsibility in its Diagnosis," by Dr. D. W.

Green of Sumter; "The Acute Abdomen," by Dr. C. J. Lemmon of Sumter.

MINUTES

MINUTES OF THE HOUSE OF DELEGATES, SOUTH CAROLINA MEDICAL ASSOCIATION, ROCK HILL, S. C., APRIL 19, 1922, CONTINUED.

The reports of the Councilors for the various district were then read, as follows:

Dr. W. F. R. Phillips, of Charleston, presented, as chairman, the report of the Committee on Scientific Work. After some discussion, Dr. S. E. Harmon, Columbia, moved that the report, as read, be published in the Journal and be voted upon at the next annual meeting. This motion was carried.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

The report which your committee on scientific work hereby submits is not what the committee has done in connection with the preparation of the program of the present meeting, but the committee's conception of how the scientific work of the Association might be more systematically planned, and being so, become more generally advantageous to the Association as a whole and its members individually.

The by-laws prescribe that the committee on scientific work shall determine the character and scope of the scientific proceedings of the Association, subject to the instructions of the House of Delegates. The apparent intent of the by-law, it seems to the committee, is that there shall be more antecedent communication of the committee to the House of Delegates before the committee can with propriety assume the important duty of deciding what shall and what shall not be the scientific work of any given meeting of the Association. The House of Delegates meets, except extraordinarily, but once a year and that on the day before the general meeting of the Association, the meeting that is devoted almost exclusively to the scientific activities of the Association. As the practice appears to be, the committee on scientific work is ap-

pointed annually and usually of an entirely new personnel, and after the House of Delegates has adjourned. Hence, the committee has no opportunity to communicate with and receive advice and instructions from the House of Delegates regarding the scientific work of the next Association year. The annual change of personnel and the inability of the new committee to communicate with the House of Delegates have worked to the end that there is neither tradition nor continuity of purpose passed on from year to year—the committee is hardly acquainted with itself and has not the benefit of the experience or of the suggestions that may have come to committees of preceding years. Under these circumstances, the difficulty, not to say impracticability, of any systematic conduct of the scientific activities of the Association as a whole is apparent. Consistent and fruitful work in any field of activity can be carried forward only where some definite plan and purpose is always in mind and guiding the energies put forth.

Therefore, in view of the foregoing, it seems to your committee that the by-laws should be modified to provide that the committee on scientific work shall annually formulate a provisional program and present it to the House of Delegates for consideration; after action by the House of Delegates the committee shall then be charged with the details of its execution, supplemented with whatever specific or general instructions and powers that the House may deem requisite or advisable to give. The advantages that appear to the committee that would follow the adoption of such a procedure are:

1. Earlier and more general information regarding the scientific program of the next annual meeting.
2. Greater probability of the program embodying subjects of interest to the majority of the members, and of interesting more members in the subjects of the program.
3. Interesting more persons in the preparation of the program.

4. Affording more time to those specially interested in the subjects to be considered to investigate and perfect whatever they may contribute to the program.

Carrying out the idea embodied in the foregoing generalized consideration of procedure, the committee presents a provisional formula of purpose and procedure for your consideration in the shape of certain propositions, illustrated wherever admissible by concert suggestions, as follows:

I. That one or two subjects chosen for collective clinical investigation every year.

Every member whose activities may bring him in relation to either or both of these subjects being requested to study them so far as possible, to reduce his observations, facts, and opinions to writing and communicate them for collation and report to a special committee, to be known as the special committee on collective clinical investigation. This committee to report at the annual meeting the results of the investigation.

Suggested subjects for 1923:

Pellagra, Fevers of atypical characters.

II. That two or three general or special subjects be assigned annually to a special committee, or committees, for review of progress made therein as determined by an examination of recent literature, and to present a summary or comment any thereon at the annual meeting. This committee, or committees, to be known as the special committee, or committees, on review of progress in the subject assigned.

Suggested subjects for 1923:

Cardiovascular diseases; Disorders of the thyroid.

III. That some subject relating to the sociological aspect of medicine be chosen annually for general consideration and discussion at the annual meeting; that two members be specifically selected to open the discussion, after which it be opened to all. This general discussion could well be conducted somewhat after the manner of a round table conversation.

Suggested subject for 1923: The State in Medicine.

IV. That the equivalent of one day, 8 to 10 hours, be allotted to individual papers of the usual sort, that is, papers on topics that the writers are individually interested in presenting to the Association.

V. That provision be made annually for one or two addresses by some member or

members of the profession, but not of this Association, who has, or have, attained distinction in medicine. The subject, or subjects, of the address, or addresses, to be determined by the President of the Association after conference with the committee on scientific work.

VI. That to hold a good general attendance of two days, which experience appears to be the maximum period that a fair attendance can be held, the House of Delegates meet hereafter on the evening of the first day of the meeting.

VII. To assure two full days to the scientific work of the Association, that no entertainments be provided by the committee on local arrangements that shall in any manner conflict with the time set for the work of the Association. While appreciating the spirit of hospitality that actuates members of the place of meeting to extend entertainment to the Association, the Association holds that the best interests of the organization are to be found in its scientific and not in its social pleasures.

Thos. J. Davis
Robt. A. Marsh.
W. F. R. Phillips,
Chairman.

Seneca, S. C.
April 15, 1922

Dr. E. A. Hines, Editor
Journal S. C. Medical Ass'n.,
Seneca, S. C.
Dear Sir:—

In accordance with your instructions, I have audited the books and accounts of the Journal of the South Carolina Medical Association and attach hereto statement, made in the form of your annual report to the Association, which exhibits the receipts and disbursements for the year ending December 31st, 1921.

Sydney Bruce,
Auditor.

Report of Journal South Carolina Medical Association, 1921.

RECEIPTS

Balance January 1, 1921	\$ 884.69
Subscriptions	1,417.00
Advertising	1,963.92
Interest on Certificate	60.00
	<hr/>
	\$4,325.61

DISBURSEMENTS

Salaries -----	\$ 992.55
Printing -----	1,737.02
Office Rent -----	120.00
Office Expense -----	113.33
Traveling Expenses Secretary ----	294.24
Miscellaneous items -----	76.50
Cash December 31, 1921 -----	991.97

\$4,325.61

Statement of Assets Journal S. C. Med. Ass'n. Dec. 31, 1921.

Cash in bank December 31, 1921 --	\$ 991.97
Time-Certificate in Seneca Bank --	1,000.00

\$1,991.97

Total Assets for South Carolina Medical Association and Journal S. C. Medical Association, December 31, 1921:

S. C. Medical Association -----	\$ 475.98
Journal S. C. Med Ass'n. -----	1,991.97

\$2,467.95

Itemized statement of Subscriptions by counties:

Aiken -----	10
Allendale -----	4
Abbeville -----	6
Anderson (regular 38—honorary4) ----	42
Barnwell -----	7
Bamberg -----	7
Columbia -----	90
Charleston (honorary 1) -----	81
Colleton -----	11
Chester -----	15
Chesterfield -----	6
Calhoun -----	6
Clarendon -----	6
Cherokee -----	11
Dorchester -----	16
Dillon -----	12
Darlington -----	16
Fairfield -----	9
Florence -----	16
Greenwood -----	23
Greenville -----	72
Georgetown -----	5
Horry -----	9
Kershaw -----	11
Lexington -----	8
Lancaster -----	9
Laurens -----	22
Marlboro -----	11
Newberry (Honorary 1) -----	19
Orangeburg -----	26
Oconee -----	10

Pickens -----	21
Saluda -----	8
Sumter -----	24
Spartanburg -----	40
Union -----	10
York -----	28
Total -----	725

Report of First District Councilor.

April 17, 1922.

I respectfully submit the following report for the first Medical District.

Charleston Medical Society has two Scientific Meetings each month and are well attended. Medical papers and case reports compose the program.

Dorchester Medical Society meets each month. It is well attended, the scientific features are papers and case reports.

Colleton County Medical Association is well organized but only meets occasionally. They promise to do better.

Beaufort and Berkeley are still unorganized, because of the few Physicians in these Counties.

Jasper County is in the same class. Only about four physicians in this county. Though I have interviewed each of them personally, I have failed to procure an Organization.

During the past year, there has been no friction or discord reported among the Physicians to me in this District.

The first District Medical Association is well organized and meets twice a year. The scientific features are quite active.

Respectfully,

A. E. BAKER, M. D.

Councilor 1st, District.

Report of Second District Councilor

Mr. Chairman and members of the House of Delegates: In presenting my annual report from the Second Medical District, which comprises the counties of Calhoun, Edgefield, Orangeburg, Lexington, Richland and Saluda, I desire to say that harmony and good fellowship seems to prevail. While all of our counties haven't a real live active society they are all organized and work in harmony together. We have a real live and highly active district society that meets twice annually. We had two meetings last year, one at St. Matthews in the summer and the other at Edgefield in January. Both meetings were well attended

and we had very creditable scientific programs. I am quite sure that we are improving each year. The only criticism that I have to make is that we do not receive quite the universal cooperation that we would like to have, though I hope for great improvement all along in the future.

Respectfully submitted,

SAMUEL E. HARMON,
Councilor of the Second District.

Mr. President, I hereby make the following report of the Third District Medical Association. This district is composed of Laurens, Newberry, Greenwood, Abbeville and McCormick counties. All the counties are at work having regular meetings etc., except McCormick. I failed to get a report from them. We find 21 regular physicians reported not enrolled in our district. We will continue to make an effort to secure their membership. There has been no report of any illegal practitioners in my district at this time.

We had our regular annual Third District Convention the past summer, it was a successful and interesting occasion. The convention was held in Laurens County at the Laurens-Clinton Country Club.

The next convention will be held at Newberry. We feel now that our societies have about all gone back to normal conditions and are doing very good work.

Respectfully submitted,

T. L. W. BAILEY,
Councilor Third District.

Report of Fourth District Councilor.

This district is composed of the counties of Anderson, Cherokee, Greenville, Oconee, Pickens, Spartanburg and Union. The medical society in each county is organized and in most instances is having regular monthly meetings with an average attendance of 60 per cent of the members.

The Fourth District Medical Society is a splendid district society. Its last meeting was held last September at Easley, in Pickens County, and was well attended by members who had splendid papers and discussions.

Dr. H. L. Shaw, president of this Association, was present and made a good talk.

It is worthy of note that all the counties in this district opposed the so-called Chiropractic bill introduced in the last legislature and expressed their support of the present Medical Practice Act.

There are a number of chiropractors in this district who are practicing without a license. One in Greenville County has been convicted in city and state court, but has taken appeal and continued practicing and been arrested again, but not yet tried.

Respectfully submitted,

L. O. Mauldin, M. D., Councilor.

Report of Fifth District Councilor.

Councilor of Fifth District begs to submit the following report:

We have five counties in the Fifth District: Chester, Fairfield, Kershaw, Lancaster, and York. Two district meetings were held during the year, one at Chester and one at Winnsboro. Both of these meetings were well attended and many excellent papers were read at each meeting. Visiting physicians were highly entertained by the local physicians of Chester and Winnsboro.

Chester County reports 16 members, 2 meetings held during the year. 2 eligible physicians not members of society, no illegal practitioners in the county, Councilor and State officers visited society during the year. Town physicians attend meetings well but country physicians rarely attend.

Fairfield County reports 14 members, 2 meetings held during the year, 2 eligible physicians in county not members of society, no illegal practitioners in county, Councilor and state officers visits society during the year.

Kershaw County reports 9 members, meetings held monthly, eligible physicians not members of society 5, illegal practitioners in the county 1. No state officers or Councilor visited society during the year.

Lancaster County reports 10 members, 4 eligible physicians in the county not members of society, illegal practitioners none.

York County reports 32 members, 9 meetings held during the year, average attendance 15, no illegal practitioners in the county. Councilor and state officers visited society during the year.

Respectfully submitted,

Thos. N. Dulin,
Councilor Fifth District.

Report of the Sixth District Medical Societies.

The Sixth District Medical Societies are: Florence, Darlington, Chesterfield, Marlboro, Dillon, Marion and Horry Counties.

All of these societies are organized, have

had unusually interesting scientific programs at their meetings.

Some of these societies have a supper, after routine work of the meeting is carried on, generally there are one or more visiting physicians to address them.

As a whole their interest in medical and surgical progress is keenly alive and the social feature of the meetings makes them very pleasant and well attended.

The Pee Dee Medical Society, which is the official society of the Sixth District, meets at Florence annually, and is always well attended and enjoyed.

I herewith submit data concerning the various societies:

Florence County. Number on roll 22. Average number of meetings a year about three. Sixteen eligible members are not now on roster, and one illegal practitioner.

Darlington County. Number on roll twenty-four. Number of meetings during year, four, with average attendance ten.

Seven eligible members in county and not any illegal practitioners.

Chesterfield County. Seven members on roll. Twelve meetings during year. There are nine eligible members not now on roster and no illegal practitioners. The Councilor visited this society during the year.

Dillon County. Number on roll —. Three meetings held during the year with an average attendance of six. Three eligible members not now on roster.

There are eleven members in Horry County Medical Society. Twelve meetings during the year, with an average attendance of seven. There are no eligible members not now on roster. Several illegal practitioners in county. This Society was visited by the Councilor during the year.

Marion County. Number on roll eight. One meeting was held during the year. There are five eligible members not now on roster and one illegal practitioner in the county.

Marlboro County. Number of members on roll sixteen. A meeting is held monthly with average attendance of sixty per cent.

There are two eligible members not on roster and one illegal practitioner. The Councilor visited the society during the year.

Respectfully submitted,

Chas. R. May, Councilor.

Report of Seventh District Councilor.

The Seventh District Medical Association

was reorganized on July 7th, 1921, with all the counties represented except Georgetown. We had about thirty present. After the election of officers it was decided to meet annually the first Thursday after the Fourth of July.

The Councilor, with the president of the State Association, assisted Williamsburg County in reorganizing September 1st, with seven members present. This county has four eligible members not on the roster. It also has one illegal practitioner in the county. Twelve members on roll. Twelve meetings during the year, with an average attendance of six.

The Councilor has also met with the Sumter County Association. The Secretary reports an average of nine meetings a year with an average attendance of twelve, with four eligible members not now on the roster. Sumter has no illegal practitioners in the county. Twenty-three members on roll.

Georgetown County. Number on roll six. Average number of meetings a year about six. Four eligible members not on the roster, and two illegal practitioners. The secretary reports very little professional jealousy. Councilor was unable to get an engagement to meet with this society.

Clarendon County. Number on roll eight, with yearly meetings four, with an average attendance of five. There are three eligible members not on roster, with no illegal practitioners. The Councilor and President visited this society during the year.

Lee County. Unable to get a date to meet with this society during the year after repeated efforts. Did not get a report from them.

T. R. Littlejohn, M. D., Councilor.

Report of Eighth District Councilor.

The Eighth District is composed of the following counties: Aiken, Allendale, Bamberg, Barnwell and Hampton.

There is no society in Hampton County, but several of the Hampton County physicians have promised to join the Allendale County Society.

An opportunity to visit the Aiken County Society has not presented itself this year and I have received no report from this society. I have visited all of the other societies of the district.

Allendale County Society has five members,

Barnwell Society ten members and Bamberg Society eleven members.

We had an excellent district meeting in Barnwell last July and were to have had an-

other in Aiken in January, but was prevented by a severe snow storm.

Respectfully submitted,

L. A. Hartzog, Councilor.

BOOK REVIEWS

THE PRACTICE OF MEDICINE. By A. A. Stevens, M. D., Professor of Applied Therapeutics in the University of Pennsylvania; Professor of Therapeutics and Clinical Medicine in the Woman's College of Pennsylvania. Octavo of 1106 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$7.50 net.

The author of this book is a writer of established reputation and the volume before us represents a wide range of diseases under the head of internal medicine. The pathology, the diagnosis and treatment have all been carefully presented. Under the head of treatment a few thoroughly tried out remedies are suggested rather than any attempt at shotgun prescriptions and advice.

THE WRITING OF MEDICAL PAPERS. By Maud H. Mellish, Editor of the Mayo Clinic Publications. 12mo of 157 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$1.50 net.

Few books have been published on the subject discussed by this author. A careful study of this monograph will certainly prove helpful to every doctor who writes papers. The practical points of this little book should prove very helpful to editorial writers as well as contributors to medical programs or journals.

THE MEDICAL CLINICS OF NORTH AMERICA (The Chicago Number). (Issued serially, one number every other month.) Volume V, No. VI, May, 1922. By Chicago Internists. Octavo of 308 pages and index to Volume V, complete with 22 illustrations. Per clinic year (July, 1921, to May, 1922). Paper \$12.00; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Among the excellent articles in this number are the following:

Clinic of Dr. Arthur R. Elliott, St. Luke's

Hospital, Abdominal Reflex Disorders, page 1509.

Clinic of Dr. Milton M. Portis, St. Luke's Hospital. Presentation of Three Unusual Cases. 1. Abscess of the Kidney. 2. Chronic Diarrhea. 3. Ulcer of the Second Portion of the Duodenum, page 1545.

Clinic of Dr. Clifford G. Grulee, Presbyterian Hospital. Infantile Eczema, page 1577.

Clinic of Dr. James G. Carr, Cook County Hospital. Banti's Disease, page 1601. Leukemia with Gout and Herpes Zoster, page 1615.

Clinic of Dr. Joseph C. Friedman, Michael Reese Hospital. Diagnosis of the Gastric Neuroses, page 1653.

Clinic of Dr. Jesse R. Gerstley, Michael Reese Hospital. Feeding the Baby, Himself, page 1785.

THE EIGHTEENTH AMENDMENT, and the part played by organized medicine. By Charles Taber Stout. New York: Mitchell Kennerley, 1921.

THE LAW OF VITAL TRANSFUSION and the **PHENOMENON OF CONSCIOUSNESS**. An account of the necessity for and probable origin of the development of Sex, and of the development of the Conscious State in the evolution of the organic world, with a preliminary statement of fundamental cosmical principles. By Charles J. Reed. "No event ever happens more than once." —Maxwell Occidental Publishing Company, San Francisco, Cal.

APPLIED CHEMISTRY. An elementary text book for secondary schools. By Fredus N. Peters, Ph. D., Instructor in Chemistry in Central High School, Kansas City, Mo., for twenty-three years; more recently Vice-Principal; author of "Chemistry for Nurses," etc. Illustrated. St. Louis, C. V. Mosby Company, 1922.

The study of chemistry has been more intensive in recent years than at any time in the history of medicine. The author of this book has presented the subject in a very clear and thorough manner.

SYMPTOMS OF VISCERAL DISEASE. A

Study of the Vegetative Nervous System in Its Relationship to Clinical Medicine. By Francis Marion Pottenger, A. M., M. D., LL. D., F. A. C. P. Medical Director, Pottenger Sanatorium for Diseases of the Lungs and Throat, Monrovia, California; author of "Clinical Tuberculosis," "Tuberculin in Diagnosis and Treatment," "Muscle Spasm and Degeneration," etc. Second edition, with eighty-six illustrations and ten color plates. St. Louis, C. V. Mosby Company, 1922.

A number of valuable monographs have been published by the author of this volume and he has presented this subject in a most interesting way. The illustrations are good and very numerous. The bibliography at the end of each chapter will enable the student to pursue the subject further.

REPRINTS!

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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

EDGAR A. HINES, M. D., Editor-in-Chief, Seneca, S. C.

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NERVOUS AND MENTAL DISEASES
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EDITORIAL

NEW PROFESSOR OF PATHOLOGY AT MEDICAL COLLEGE

At the meeting of the Board of Trustees of the Medical College of the State of South Carolina, held June 1st, the election of Dr. Bowman Corning Crowell to the position of Professor of Pathology to succeed Dr. Kenneth M. Lynch, resigned, was confirmed.

Dr. Crowell, although a Canadian by birth is a citizen of this country, and graduated from McGill University in 1900, and has had extensive experience as a pathologist, having served under Adami; as assistant in Pathology at Bellevue Hospital; with the Bureau of Science in Manila; as Professor of Pathology and Bacteriology in the Medical School of the University of the Philippines and since 1917 as Pathologist in chief

at the Oswaldo Cruz Institute of Rio de Janeiro, Brazil, the great research institute of South America.

Dr. Crowell has written and published several articles which have appeared in the Proceedings of the New York Pathological Society; Philippine Journal of Science; Journal of the American Medical Association; Journal of Infectious Diseases, and American Journal of Science, from 1908 to 1919 inclusive. His most important research work has been in the field of tropical medicine in which he is an authority.

Dr. Crowell comes to us highly recommended as a Pathologist by the Rockefeller Foundation, and we feel that the College is very fortunate in securing the services of a man of Dr. Crowell's ability.

Dr. Crowell will be present at the reopening of the College in September.

AUTOPSIES

Professor Plowden, the editor of the department of Pathology and Bacteriology has called attention in this issue of the Journal to the great value of autopsies. There is no single source of information to the clinician which promises so much as a thoroughly studied post-mortem examination of his patient. The Mayo Clinic has proven conclusively that a post-mortem may be obtained on more than eighty per cent of the patients dying at Saint Mary's Hospital. Many other hospitals in this country now report more than fifty per cent autopsies. The laboratories of the Expeditionary Forces in France during the World War in the later months of the struggle reported more than ninety per cent autopsies. The crux of the

situation with reference to the value of this procedure to the great mass of private practitioners in America remains to be solved. Many post-mortems may be secured by the family physician owing to the strong hold upon the esteem of the family. All that is needed as a rule is a tactful presentation of the ultimate benefit such an examination may prove to the family of the deceased or to the sick public in similar obscure cases. The leading physician in almost every community is in a position to take the initiative in this matter and he should do so. The younger men now graduating from class A schools often have the training to become helpful assistants in interpreting the findings. It is the duty of the American profession to be more aggressive along this line.

ORIGINAL ARTICLES

A PLAN BY WHICH THE GREAT DESIRE OF THE PUBLIC FOR BETTER HEALTH MAY BE UTILIZED BY THE GENERAL PRACTITIONER FOR HIS AND THE PUBLIC'S MUTUAL BENEFIT.

By James A. Hayne, M. D., Secretary and State Health Officer, Columbia, S. C.

Mr. President and Gentlemen of the Second District Medical Association:

It is a privilege, as well as a pleasure, to address this audience. I do not claim originality for the remarks which I am now going to make, but must ask you to give credit for all that is good in this address to Dr. Watson S. Rankin, State Health Officer of North Carolina, and to attribute the bad to your own health officer.

For the first time since practicing medicine—25 years— I had occasion to be ashamed of the fact that I was a physician.

This was while in St. Louis attending the sessions of the American Medical Association, especially the House of Delegates. We have taught the public, and we have ourselves believed, that the profession of medicine is an altruistic one, and that its mission is almost equal to that of the ministry, but when we saw and heard the arguments presented by the chosen representatives at the American Medical Association we were compelled to believe that medicine was becoming a trade and that self-interest was the guiding factor and motive in the deliberations of the House of Delegates. I say this with extreme sorrow. It is not true of the Delegates from most of the Southern States, but New York, Michigan, Illinois, and many other states that have large representations in the House of Delegates, clearly indicated that they were opposed to what they called "State medicine", and State medicine as they defined it consisted in any efforts made by the physician

to better the condition of the public in matters of public health.

Their first resolution condemned the Sheppard-Towner Act. Now, the Sheppard-Towner Act simply provides that each State shall be given a certain sum of money from the Federal government, equal to the amount that State is willing to contribute, for the prevention of death among mothers and children. There is no dictation on the part of the Federal government as to the methods of the spending of this money. Each State maps out its own plan of action. The sole criterion used by the Federal government to determine whether this is a proper expenditure of Federal funds is whether it is primarily expended for the purpose of reducing the number of deaths among mothers and children. Yet the House of Delegates went on record as being opposed to the Sheppard-Towner Act.

The House of Delegates also went on record as being opposed to any clinics that were aided by either Federal, State, or voluntary contributions. This means that they are opposed to the treatment of school children unable to pay for certain handicaps which the medical inspection of school children has shown to be present among the school children to the extent of 4,000,000 with defective vision, 15,000,000 with defective teeth, and 1,000,000 with tonsils and adenoids.

The House of Delegates also went on record as being in favor of the liberal distribution of whiskey to be placed by the Federal government in cheap packages so that the medical profession could have a gorgeous harvest from the writing of prescriptions for those thinking that they were suffering from ailments requiring alcoholic stimulants.

Gentlemen of the Second District Medical Association, is not this a sorry spectacle, and are you not ashamed to think that this is given to the public as the aims, aspirations and beliefs of the proud profession to which you belong?

In South Carolina last year, owing to apathy and possibly passive resistance of the medical profession, the department for the education and treatment of the public for venereal disease was allowed to be abolished by the State legislature. The thinking doctor knows that 20 per cent of the inmates of our institutions for the insane in the United States, whose total population approximates the total population of all our universities. He also knows that gonorrhoea is the chief cause of sterility and the principal contributor to the gynecological wards of the hospital; that the inclusion or exclusion of syphilis is necessary in every scientific diagnosis of disease; that only 16 per cent to 20 per cent of venereal disease is reported by physicians; that not more than 30 per cent is treated by physicians; and yet they wish the 70 per cent to go untreated because for sooth they think that some dollars have been extracted from their pockets by free clinics.

Gentlemen of the medical profession, you must make yourself felt in your counties so that the representatives sent from those counties can reflect your views in making laws for the preservation of health in South Carolina. In adult life there are 60 per cent of apparently well people going about their daily avocation who are slowly but surely approaching their graves, carrying with them diseases in their incipency that could be arrested were they examined. The public is becoming educated and the public is demanding that the medical profession make good. They feel that they have in certain instances been exploited by that profession, that the growth of high-priced specialism has been injurious to the public welfare, and that the medical profession is facing the greatest crisis in its history. The family physician who brought the babe into the world, treated it during infancy, childhood and adolescence and then became the advisor when that babe itself became a mother, and saw that mother through the vicissitudes of child-bearing and finally

through all the ills that flesh is heir to until death closed her eyes, is a thing of the past. No more is there intimate relationship between patients and physicians. With instruments of precision she is now carefully diagnosed and makes the rounds of the specialists, each one interested in the functioning of some particular organ of her body and not in how that body functionates as a whole. Thus the profession is losing touch with the patient and the patient is grasping at straws. Hence the rise of osteopathy, chiropractic, Christian Science, and all the innumerable quacks that now fatten upon the public purse.

Dr. Rankin says that there are two principal ways of reaching the public. One is by the written word—bulletins, pamphlets, press articles, etc. This is the method of the Bible. The other is by the living voice—addresses to individuals collectively. This is the method of the preacher. The combination of these two methods is the plan which I wish to present to the Medical Association. We believe that if each county medical association will agree to select from 20 to 25 subjects on hygiene and health, giving the information that the country people need, and have these addresses written and authorized by the County Medical Association and then have the members of the County Medical Association to agree to deliver these lectures so that they cannot be accused of self-advertisement in their special branches but are only delivering lectures authorized by the medical association and thus bringing before the public the facts of what the medical profession can do for the public if they will only apply to them, a greater demand for medical service will be created. To supply the demand that will be caused by these lectures which will cause the public to request and demand more adequate diagnosis and more adequate treatment of the disease we advocate the formation of clinics. In the average county medical association of 25 members a service of four hours per week per physician would provide

100 hours of professional service every week for the county. Such a public clinic could operate two afternoons, 4 hours each, every week, with 12 physicians in attendance, or four afternoons, two hours each, with 10 physicians in attendance. Or, 4 afternoons, three hours each, with 8 physicians in attendance. With 100 hours per week and with physicians working in groups as they did in examining the drafted men during the war, from 100 to 150 people per week, from 5,000 to 7,000 per year could be brought in touch with the medical profession. As a result of these examinations, there would be inevitably an increasing demand for medical treatment, which would be classified into those who can pay and those who cannot pay. The first should be referred to their family physician, the second, which constitute the charity patients of the county, should be taken care of in the following manner. It should not rest upon the 25 physicians of the county to bear the burden of the treatment of the poor of the county. This should be borne by the public and a just charge made for each diagnosis and treatment given and these funds should be divided among the physicians serving the clinic. The method of doing this can be worked out by the County medical association and the county commissioners and the county representatives. We would suggest that the following method should be used for collecting these funds: First, a nominal charge against all who apply for clinic treatment. Second, Red Cross Chapter fund. Third, funds from the sale of Christmas seals. Fourth, appropriations by City or town authorities. Fifth, appropriations by County authorities. Sixth, annual church collections from the churches of the county. Seventh, contributions from benevolent and financially able citizens of the county. Remember that this cannot be done without the heart to heart personal contact between the physicians and the public, as outlined previously in this paper. The written word must be forward-

ed through bulletins, pamphlets, through the newspapers and through other agencies. This to be done by your State Board of Health. The addresses must be written and the doctors must be willing to give them. This by your County Society. In addition, each physician must constitute himself a committee of one to see to it that the public know that they are striving not only for the physicians' benefit, but for the benefit of the public. A mutual interest must be aroused and antagonism as it now exists must be abated.

As a by-product of this campaign there will be erected in every county in South Carolina hospitals for the care of the needy sick; hospitals open for all who need medical attention; hospitals that do not cluster

around surgical clinics, but are for the general public; hospitals where mothers can go through the supreme ordeal of womanhood with the knowledge that the best that the State or county can afford is theirs to command.

I hope, gentlemen of the Second District, that the reply of South Carolina to the self-seeking delegates at St. Louis will be that they have adopted as their own the motive of the Medical College of the State of South Carolina, which it, "Agiemus largiendo"—we grow by giving.

I wish again to say that the ideas expressed in this paper are Dr. Watson S. Rankin's, State Health Officer of North Carolina, but I wish South Carolina to be the first State to put these ideas into active operation.

AORTIC INSUFFICIENCY

Thesis by J. F. Woods, Member of the Graduating Class 1922 Medical College of the State of South Carolina, Charleston, S. C. continued.

MECHANICAL INFLUENCE OF THE LESION

The blood having been thrown into the aorta, regurgitates into the left ventricle during diastole, causing an overdistension of the cavity and a reduction in the blood column. The amount returning varies with the size of the opening. Simultaneously the left ventricle is being filled by the normal flow of blood from the left auricle. It is clear that the ventricle must overdistend at once from these two currents of blood. There is a tendency to steady dilatation of the ventricle since the lesion itself is progressive. To expel this increased amount of blood demands more cardiac power and the heart hypertrophies as a result of this overwork. In this way the defect is compensated for and as long as hypertrophy can take care of this added work the body generally does not suffer from lack of blood

because an excess of blood is thrown into the aorta and is promptly regurgitated, the normal amount passing on through the arterial system. Dilatation and hypertrophy develop equally until the left ventricle reaches enormous size, forming the so-called corbovinum. The increased volume of blood that is thrown into the aorta and other arteries with increased force subjects the arteries to increased tension, causing a rise in blood pressure and a generalized arterio-sclerosis, resulting further in atheroma or aneurysm or both. The coronary arteries are similarly involved, their caliber being lessened and particularly their orifices. As a result the heart muscle itself is one of the first organs to suffer for lack of nutrition. This anemia of the heart muscle results further in fatty or fibroid degeneration of the cardiac musculature. This pathologic change causes secondary dilatation which soon predominates over the hypertrophy. It is when hypertrophy fails to develop equally with dilatation that the symptoms of the disease first manifest themselves. Due to the dilatation and increased tension there are further changes in the heart itself. The papillary muscles may be greatly flattened. The mitral leaflets are

not usually affected but may become the seat of sclerotic endocarditis. But there is often relative mitral insufficiency from stretching of the mitral ring. When mitral incompetency has been established, impeded pulmonary and general venous circulation, together with the secondary lesions in the left auricle, pulmonary vessels and right ventricle that are characteristic of mitral insufficiency, are the result. The blood current through the mitral orifice may be retarded owing to the simultaneous influx of blood from the aorta, thus causing pulmonary congestion without either change in the valves or stretching of the mitral orifice.

Symptoms:

In aortic regurgitation the symptoms are quite pronounced and characteristic usually, but in some cases there may be no subjective symptoms and the condition be discovered in routine examination of the heart. The onset may be sudden or gradual. The reason for this is, that so long as the hypertrophy of the left ventricle compensates for the otherwise injurious consequences of the valvular defects, the blood supply of the body is fully maintained. The left ventricle can hypertrophy to great limits and still maintain compensation. Compensation does not fail so readily in the young.

With the development of marked hypertrophy severe muscular exertion and strong mental excitement will, by exciting overaction of the powerful heart, bring on a train of symptoms, as throbbing headache, vertigo, and tinnitus aurium. Symptoms of arterial anemia especially cerebral, and also those of general arterio-sclerosis frequently coexist. Headache, dizziness, flashes of light, and a feeling of faintness on arising quickly are among the first symptoms. The patient's general countenance is one of pallor. Dilatation of the peripheral vessels often leads to hot flushes and drenching sweats, and such cases are often confused with tuberculosis. Dyspnea may come

on early, but this rarely happens except upon inordinate exertion or great mental excitement—conditions that cause strong heart action and prohibit the blood discharging from the left auricle into the left ventricle, thus causing pulmonary congestion. To some extent the cause of dyspnoea may be acidosis. But usually dyspnoea is a late symptom coming on when compensation fails. Pain is usually an early symptom and well-marked. It is classed as precordial. It is very variable in its manifestations. It may be dull, aching in character and localized, or sharp and radiating, like the pain of angina pectoris, which is found more frequently in aortic regurgitation than any other valvular disease. The attacks of pain are more severe and more frequent than those of mitral disease. The attacks may be brought on in peculiar ways. In some the pain accompanies a sudden rise of blood pressure provoked by excitement or sudden muscular effort, and the patient may roll around in agony until it subsides. Temporary relief may be obtained by transient lowering of the blood pressure by the use of the nitrites, the pain returning again as soon as the effect of the nitrite has worn off. In others the pain is produced during periods of exhaustion, such as occur from prolonged sleeplessness. Others have pain from no apparent cause, as one man who was able to do heavy work during the day but suffered severely upon first getting out of bed in the morning. Though the pain is indicative of approaching decompensation, many live for years after the appearance of the pain. One explanation of the pain is sudden forcible dilatation of an aorta already the seat of disease as aortitis, such as is produced by sudden muscular effort. A feature strikingly characteristic of aortic regurgitation is the susceptibility to nerve stimulation. The heart and blood vessels are readily stimulated, the former to rapid action the latter to variations in caliber of the vessels. The recognition of this peculiarity is important, for some people when

first told that they have an affection of the heart develop rapid heart action with subsequent exhaustion. Moreover, the cases are very susceptible to a mental stimulus, which may increase the heart action and also raise the blood pressure causing attacks of angina pectoris. Palpitation of the heart is another symptom often complained of which is but the patients own observance of his rapid heart action. Graver mental symptoms are hallucinations and delusions and in some cases delirium. They may exhibit suicidal tendencies. More common nervous phenomena are peevishness, irritability, delusions, and melancholia.

Upon the advent of failure of compensation more serious symptoms appear. The cardio-pulmonary circulation being retarded and congested, there is increased dyspnoea, which is greatly increased by exertion and at night when in the recumbent position orthopnea results cyanosis is rare but in the later stages when it is seen it probably comes from an associated mitral insufficiency. Due to congestion of the lungs or oedema, cough is usually a troublesome symptom, and not infrequently a hemoptysis also results. These two symptoms may cause confusion with tuberculosis. Hemoptysis is not so frequent as in mitral disease but is usually more severe. Marked enlargement of the liver due to passive congestion may occur and give rise to the suspicion of a new growth. General anasarca is not common but oedema of the feet may occur early and may be due to anemia, or venous stasis, or both. Unless there is an associated mitral lesion it is rare for the patient to die with general anasarca. In aortic regurgitation a higher grade of symptomatic anemia is reached than in any other cardiac lesion. The red blood cell count may be as low as 2,000,000. The intercurrent of acute endocarditis or an acute exacerbation of chronic endocarditis as evidenced by slight irregular temperature and prostration is observed not infrequently in the terminal stage. Sudden death is more

common in aortic regurgitation than in any other valvular lesion and probably results from involvement of the coronary arteries. Another explanation offered for sudden death is acute dilatation of the heart following some sudden excessive muscular effort. This can be appreciated when we remember that in aortic insufficiency the heart hypertrophies and dilates enormously, and compensation fails when the limits of hypertrophy has been reached. When a heart that has no reserve force left is suddenly called upon for more work it is incapable of responding and sudden dilatation takes place, resulting in death.

Embolic symptoms are not infrequent. The embolus may be in the lung, liver, kidney, spleen, brain or spinal cord. The emboli probably result from an associated endocarditis. The symptoms vary with the location of the embolus. In the spleen the embolus will cause pain with enlargement of the organ; in the kidney, pain and hematuria; and in the brain or spinal cord, probably paralysis.

In the series of the 63 cases treated at Roper Hospital the majority gave symptoms of decompensation upon entrance. Only very few cases were discovered in ordinary routine examination. The onset of symptoms were sudden in 19, and gradual in 35 of the cases, there being no data on the remaining 9. In 32 per cent of the cases dyspnoea was a prominent symptom; 11 1-2 per cent complained of precordial pain and vertigo; 16 1-2 per cent suffered from headache 16 per cent had swelling of feet and legs 42 1-2 per cent complained of dyspnoea and edema of the lower extremities; 36 per cent had an associated cough with other symptoms; and 7 per cent had occasional palpitation of the heart. In considering these symptoms it is evident that only the most pronounced ones were listed, little attention could have been given to details or to securing a history of the prodromata. The cases were drawn from a class of people incapable of giving an authentic history in

the majority instances which probably explains to some extent the incompleteness of the histories. In this class of patients the prodromata are explained by biliousness, indigestion and other common complaints. Too many of the cases occurred before the hospital standard required as full and detailed history for record as possible to secure.

(To be continued)

BASAL METABOLISM AS AN AID IN THE DIAGNOSIS OF TOXIC GOITERS.

By Dr. J. H. Cannon, Charleston, S. C.

Basal Metabolism is a measurement of heat production in an individual.

Lavoisier in 1780 recognized the importance of oxygen for the organism. His experiments proved that oxidation was greater after exercise and during digestion than after complete rest. About 70 years afterwards Regnault and Reiset invented a machine to determine the amount of oxygen absorbed, and the amount of carbon dioxide produced. The U. S. Government in 1894, gave Dr. Atwater funds to investigate problems in nutrition, and it was he who devised the first respiratory calorimeter. In 1905 the Carnegie Institute gave to Atwater and Benedict funds to improve on their respiratory calorimeter. Lusk and De Bois, in 1915 at the Bellevue Hospital, published several papers on clinical calorimetry, and showed the close similarity between direct and indirect calorimetry in the normal as well as abnormal individuals.

Although an increase in the metabolic rate is primarily evidence of hyperthyroidism (about 95 per cent,) we do find an increase in hyperpituitarism, and in all fevers. A decrease in the metabolic rate is found in all

cases of hypothyroidism and to a certain extent, but not as great, in hypopituitarism, and other conditions, such as starvation from any cause, diabetes, etc.

Hyperthyroidism frequently gives clinical symptoms of other diseases such as neurasthenia, tuberculosis, myocarditis, ovarian disease etc. In such cases toxic goiter is distinguishable only by finding an increased basal metabolism, whereas, in the other conditions the basal metabolism is normal. I should like to say in passing that one of my patients had a diagnosis of pulmonary tuberculosis made, and was treated in a sanatorium in New York state for five months before the true cause of her trouble was found. Dr. Emil Goetsch, of Brooklyn, reports several such cases, referred to him, some of these cases being treated for tuberculosis in sanatoriums as long as five years before it was found the disease was due to the thyroid.

About eight years ago, Kendall found thyroxin to be the active agent of the thyroid gland. Plummer and Kendall, by experiments, discovered that there were 14mg of thyroxin in the body of a normal man, outside of the thyroid gland. They have also proven that 22mg of thyroxin given to a myxedematous patient would bring the metabolic rate to normal in about ten days, hold it normal for about ten days more, and that the metabolic rate would go to its original state in about five or seven weeks. It has also been demonstrated that 2mg a day will increase the metabolic rate about 25 per cent above normal; and 3mg will hold the metabolic rate 50 per cent above normal. Plummer says: "Fifteen milligrams of thyroxin given intravenously to patients with exophthalmic goiter who have a basal metabolic rate above plus 65 may not cause notable reaction; when given to patients having large colloid goiters with bruit, the bruit disappears and the thyroid shrinks rapidly, but constitutional reaction may be absent. With these two exceptions a sustained elevation of the basal metabolism has followed

Read before the South Carolina Medical Association, Rock Hill, S. C., April 19, 1922.

every intravenous dose of more than one milligram of thyroxin."

In a normal person the thyroid is caused to function by a decrease in the amount of thyroxin in the body, and a daily dose of one milligram of thyroxin puts the thyroid at complete rest. The average metabolic rate in a myxedematous patient is about 40 per cent below normal. The edema is recognizable when the rate is 15 per cent below normal. The edema may disappear when the rate is a little below, after rest and reappear after exertion. One point that I wish to bring out in making a diagnosis is, that when a low metabolic rate, not due to a hypothyroidism, you do not get an edema.

We have two types of toxic goiters: exophthalmic and the adenoma. Very often in consultation my colleagues will say: "This patient has no goiter as there are no eye symptoms or marked enlargement of the gland." As a matter of fact at the Mayo clinic where a large number of goiters are seen, they have proven that a large percentage of goiters are adenomatous, and Plummer has shown that the toxic goiters of the adenomatous type present a clinical entity. The metabolic rate is increased in both conditions, but the clinical course is different. Exophthalmic goiter, besides the eye symptoms show a peculiar form of nervousness, a bruit and more or less gastro-intestinal crises. The difference is important from a surgical standpoint. In an adenoma remove all in one operation; whereas, in the exophthalmic goiter, the purpose is to reduce the hypersecretion of the gland either by hot water injections, or one or more ligations, and finally remove one or more lobes.

Ordinarily, the basal metabolism is increased from seven to eight per cent for each degree rise in Fahrenheit. In malaria and typhoid a rise is relatively a little higher due to a higher level protein, and in tuberculosis, relatively a little lower on account of the low level of protein metabolism. Dr. Eugene F. DuBois of the Russell Sage Institute of Pathology, after several years of

careful study, says that you can accurately estimate the increase in the metabolic rate for each rise in Fahrenheit in 83 per cent of all fevers. I should like to say that in the last year I have seen patients with hyperthyroidism with the following symptoms: Case (1), age 54. Married. Usual diseases of childhood. Typhoid fever 25 years ago. Four children, oldest 27, youngest 17, no miscarriages. In usual health until January, 1920, at which time patient had severe case of influenza. Weight at that time 128 pounds. Never fully recovered from "flu." Followed in six months with acute dysentery, was ill for ten days. Never regained strength. From this time on patient gradually lost weight and strength. Was easily fatigued. Pulse rate increased gradually up to 120 to 130, marked tremor of fingers when extended and separated. No hypertrophy, no exophthalmos, no sweating. Wassermann, repeated findings negative. Blood count, differential and complete normal. Lungs, heart and kidneys, negative. Slight visceral ptosis. Color poor. Muscles soft and flabby. Feeling tired, regardless of amount of rest taken. Basal metabolism plus 37. Diagnosis: Toxic goiter. Thyroidectomy January 21st, 1922. Recovery. Pulse rate 80 to 90, no tremor whatever, steady gain in strength and weight with every indication of complete recovery in course of time.

Case 2.—I am going to report this case from the letter just as her husband wrote me: "She is very weak and short of breath on walking. She has a dizzy feeling in her head, and when she stoops down her head feels heavy and full which also causes a blindness. She often spits her food, has nervous spells which draw her nerves. She has taken medicine for some three or four years." I think this a very good history and I thought of the thyroid before I saw her. She was a young woman thirty years old, and had a gynecological operation some six years ago, for what she did not know. On examination I found her dyspneic from

a walk of two blocks, and after a thirty minutes rest her pulse was 118, with a small goiter, found only by careful palpation. She had no eye symptoms. Several days later after the usual preparations I found her metabolic rate plus 26. Time will not permit my reporting more cases.

I should like to say that an increase or a decrease in the metabolic rate is not always conclusive evidence for a diagnosis of diseases of the thyroid but is an invaluable aid.

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THE DIAGNOSIS AND TREATMENT OF TOXIC GOITERS.

By Chas. J. Lemmon, M. D., Sumter, S. C.

In the appropriate words of Dr. Stuart McGuire, "The thyroid gland is in many respects the most wonderful organ in the body. Through its internal secretion it influences the physical development of the child and the mental activity of the adult. It regulates the growth of the bone, the formation and distribution of fat, and the nutrition of the skin, teeth, hair and nails. It plays an important part in menstruation and parturition and it has much to do with sexual desire and power. It influences the rate of the heart beat, the character of the peripheral circulation, and hence markedly affects the general blood pressure. It presides over the nitrogenous metabolism of the body and in other and perhaps unsuspected ways plays an important part in the human economy."

The diagnosis of diseases of this gland is not always easy. Typical cases are easy.

Read before the South Carolina Medical Association, April 19, 1922, Rock Hill, S. C.

The atypical case presents so varied a symptomatology that many cases are still being overlooked. From our community a larger per cent of diseased thyroids have gone to larger medical communities undiagnosed than any other medical or surgical condition. Barker says, "The large number of tachycardias in women which cannot be explained whether associated with thyroid enlargement or not are due to perverted thyroid function."

Since the perfection of the instrument for determining the basal metabolic rate it is possible for all physicians living in a hospital community to properly diagnose their cases. One member of the hospital staff can usually secure an instrument and learn to make the determinations accurately. The basal metabolic rate is the most important differential test in the diagnosis of toxic goiters.

Plummer, of the Mayo clinic, after years in pains taking study of thousands of cases of goiter, claims that there are only three definite types: Colloid, Adenomatous, and Exophthalmic, and that all of the other types seen clinically are either variations or combinations of these three. A simple classi-

fication like this does much towards eliminating confused ideas with regard to the various types of goiters discussed in the literature. Since the number of patients operated upon for goiter is constantly increasing the question of the indications for surgery in the different types becomes important.

COLLOID GOITER

Is definitely a goiter of youth; rarely ever seen beyond the age of thirty and occurs most frequently between the ages of fifteen and twenty. This type of goiter produces the uniform fullness of the neck so often seen in young women. It is frequently associated with nervous symptoms and tachycardia that renders the differentiation of exophthalmic goiter quite difficult, especially of the vasomotor type with thrill and bruits. These cases frequently react markedly to the epinephrin (Goetsch's test) and are diagnosed exophthalmic and erroneously operated upon. All goiter cases should have the basal metabolic rate determined before operation. This type furnishes the best example of its great importance. For often our best clinicians cannot differentiate it from the exophthalmic without the aid of the basal metabolic rate. The rate in the colloid type is never increased.

Clinically, Colloid goiter is recognized by the symmetrical enlargement of both lobes and of the isthmus of the thyroid which it produces and by the characteristic soft granular feel it imparts to the palpating fingers. In many instances it produces no symptoms except slight nervousness or worry over the knowledge of the fact that it exists.

Microscopically, it differs from normal thyroid tissue in that the acini are dilated and filled with colloid material.

Treatment: The treatment is medical and not surgical, except in cases of pressure symptoms. After operations in such cases the medical treatment should be given or the goiter will return. The medical treatment should consist of giving thyroxin and painting the gland locally with tincture of iodine.

If the gland fails to disappear under this medical treatment, it indicates the case is not a simple colloid goiter but is one of mixed type often seen in which a colloid goiter is associated with a small adenomatous growth of the thyroid.

ADENOMATOUS GOITER.

This is the most common type of goiter, and most of the large goiters that we see are of this type. These come on in middle life as a rule but their presence probably dates back to early childhood; and perhaps to the presence of foetal rests in the thyroid. At times they produce enormous enlargements of the thyroid gland. Degenerative changes are prone to occur usually through hemorrhage, and according to the degenerative change which predominates. The various clinical varieties of goiters such as hemorrhagic, cystic, and calcareous have received their names. There is frequently a decrease in secretory activity of the gland, producing a condition of mild hypothyroidism with a lowered basal metabolic rate.

CLINICALLY

We have two main types of adenomata, the toxic and the nontoxic. In both the thyroid is irregularly enlarged and the adenoma may be single or multiple. These tumors may be cystic, soft, hard, or even stone like on palpation, according to the degenerative changes that have occurred. Microscopically, areas of encapsulated adenomatous tissue are found throughout the thyroid gland. Up to the present time it has been impossible for pathologists to note definite changes in either the thyroid tissue or adenomatous tissue in toxic adenomatous goiters by which a diagnosis of hyperthyroidism can be made. Symptoms of the non-toxic adenomata are those of pressure; whereas the symptoms of the toxic type are those of pressure, plus the signs of toxæmia. Plummer has found that about 23 per cent of adenomata become toxic near age thirty. When the toxic symptoms develop, the metabolic rate is found to be increased. Plummer was the first to point out the differences between Hyperthy-

roidism associated with adenomata and that resulting from hyperplasia in exophthalmic goiter. He gives the differences as follows: "The body is differently affected by the long continued mild hyperthyroidism in adenoma and by the rapidly increasing, severe hyperthyroidism of exophthalmic goiter. In the former the cardio-vascular system suffers more severely, while in the exophthalmic goiter the nervous system is more profoundly affected. These myocardial changes are manifested by palpitation, arrhythmia, dyspnea, oedema, and high blood pressure except in the last stages, when the blood pressure is low. In adenomata the toxic symptoms are rare before thirty. The basal metabolic rate is increased although it is not as high as in exophthalmic goiter. The absence of exophthalmos is conspicuous in the presence of tremor, flushed moist skin, tachycardia and loss of weight and strength." Severe toxæmia from hyperthyroidism may result from an adenomatous growth which may be barely palpable.

Treatment: The treatment of adenomata before thirty is "watchful waiting" because toxic symptoms seldom develop before this age, and it is impossible to remove all of the diseased thyroid on account of the extensive involvement of the gland. Furthermore, quite a few adenomata in girls disappear without operation. If the patient is not seen until past thirty years of age operation should be advised without hesitancy whether toxic symptoms are present or not. The treatment of the adenomatous type with hyperthyroidism is immediately surgical unless the cardio-vascular system has undergone so much damage that the patient is not a good surgical risk. In these cases, treatment of rest in bed with digitalis is often necessary preliminary to operation. The removal of toxic adenomas causes the metabolic rate to drop quickly to normal and to remain normal and in practically all of the patients very marked improvement immediately follows such an operation.

EXOPHTHALMIC GOITER.

The exophthalmic goiter may occur at any age, but is most often seen in third or fourth decades of life. The condition may develop acutely or in some patients its onset is insidious and severe symptoms do not develop until eight or twelve months later. At which time the patient passes through a period of severe toxæmia with all of the classic symptoms of exophthalmic goiter present and which is termed a thyroid crisis. Other cases run a chronic course and are more difficult to diagnose. After passing through a crisis the patient usually improves as far as the symptoms and general condition are concerned, but in the majority of cases during the next few years he passes through another similar period. Great damage occurs to the heart and vital organs during these crises and patients who escape death may become chronic invalids.

The four classical symptoms are tachycardia, exophthalmos, fine tremor, and a palpable tumor. Associated with these are usually flushed moist skin, the loss of strength and weight, and an increase in the basal metabolic rate. The gland is in nearly all cases symmetrically enlarged and hard. The blood supply is greatly increased, causing an increase in the thyroid vessels, and an increase in the amount of blood circulation through the gland. This produces a typical bruit heard over the gland. Microscopically the gland shows a hyperplasia of the epithelium of the acini with an increase of the depth of each cell. The amount of colloid is very much decreased. The same changes are noted in all portions of the gland.

Treatment: The best results in the treatment of exophthalmic goiter are obtained through surgery. As soon as a diagnosis is established the patient should be operated on before the toxæmia has an opportunity to produce serious changes in the nervous system and to the heart. I heard Dr. Judd say that he had never seen a case of hypothyroidism produced by removing too much

of the gland, but he had seen many cases requiring a second operation because not enough gland was removed at the first operation. It cannot be denied that certain patients improve and apparently recover under medical and X-ray treatment. In the beginning of the disease, however, it is impossible to distinguish between the patients who may fall in this group and those who are destined to suffer severe damage as the disease progresses. Great responsibility is assumed, therefore, by advising medical and X-ray treatment in early cases when thyroidectomy might prevent the development of the severe condition, and in some instances the death of the patients who would fail to improve under such treatment.

Dr. Crile says that the greatest number of cures are obtained by surgical treatment. From his clinic in Cleveland he has recently reported 500 cases with 5 deaths, his last 400 consecutive cases with no deaths. He states that these were not selected cases and no cases were rejected and that many were in a dying state from the effects of long standing hyperthyroidism. He is able to report such results because of his efficient method of handling his cases. Being able to judge how much his patient is able to stand at once. By his method of anociaction he ligates one superior thyroid artery at a time under combined anæsthesia of novocaine and nitrous-oxide, and only after the patient has been prepared for the ligation by rest in bed and digitalis. Following the ligations, after a variable period, depending on the way the patient reacts to the ligation, a partiallobectomy, perhaps each side at different times, is done in the same manner as the ligations. The method of surgical treatment, that is whether an immediate bilateral lobectomy at one sitting or whether a preliminary ligation of the thyroid vessels, will depend entirely on the condition of the patient. This preparation or conditioning of the patient is more important than the actual operation. The ligation is done to determine how the patient reacts

to surgery and to cut off the blood supply to the thyroid and thus lessen its activity. No patient should be operated on during a crisis. They should be treated by means of rest, fluids, and careful nursing until the crisis is past and until there is gain in weight with a corresponding subsidence of the pulse rate, the nervous and mental irritability. The metabolic rate usually drops considerably; patients who have just passed through such a period are not likely to be thrown into an acute attack of hyperthyroidism by thyroidectomy.

The determination of the basal metabolic rate is a great aid in diagnosis in the early stages of exophthalmic goiter. It is a definite index at the time it is taken of the amount of hyperthyroidism but it gives no indication of the amount of damage which has previously been produced and can therefore be used as an aid in deciding the type of operation which should be performed in a given patient. The clinical pictures of patients with the same rate vary; some patients develop a tolerance to an increase metabolism; for instance, one patient with a rate of plus 50 per cent may be in a crisis and be extremely ill, while another with the same rate may show a very different clinical picture and be a fair risk. Knowledge of the basal metabolism rate is of aid after operation in determining whether a sufficient amount of gland has been removed and in deciding whether patients with symptoms indicative of hyperthyroidism after operation should be operated on again for removal of the remaining portion of the gland.

The results obtained following thyroidectomy depends largely on the extent of damage to the vital organs at the time of the operation, the best results being obtained in patients operated on early in the course of the disease before severe damage to the vital organs has occurred. If the damage to the organ has been extensive, it is impossible to restore the patient to normal health; the operation usually stops hyper-

thyroidism and great improvement follows, but true organic damage cannot be repaired.

Summary: Our goiter patients would receive the greatest benefit if the whole profession would remember: (1) That toxic goiters may be present without evident enlargement of the thyroid or eye symptoms. (2) That toxic goiters are frequent, that they may produce a great variety of symptoms often atypical and simulate many other diseases, such as tuberculosis, myocarditis, neurasthenia, menstrual disturbances, etc., and that the basal metabolic rate is of greatest importance in the differential diagnosis. Remember Plummer's simple classification of goiters into three classes: (a) Colloid; (b) Adenomata; (c) Exophthalmic. Remember further that (3) Colloid goiters

occur in young people rarely persisting beyond the age of 30, are not surgical; and respond to treatment with iodine and thyroxin. (4) That Adenomatous goiters rarely give trouble before the age of 30. Advise removal beyond this age. If associated with toxic symptoms advise immediate surgical treatment. (5) That exophthalmic goiters may develop at any age but most often between the ages of 20 and 40. Advise immediate surgical treatment; (b) That the mortality from surgery is lower than that from any other form of treatment.

I fully acknowledge my indebtedness to Drs. W. F. Sistrunk, Stuart McGuire, and L. F. Barker, from whom I have abstracted liberally, and in many instances verbatim in the preparation of this paper.

THE SURGICAL TREATMENT OF GOITER; WITH CASE REPORTS

By Carl B. Epps, M. D., Sumter, S. C.

By the term goiter, and its synonyms, we designate an enlargement of the whole, or a portion, of the thyroid gland, of short, or prolonged, duration.

Goiters have been variously classified, but the mere fact that there are so many different classifications, by different authorities, is proof that no classification yet made has proven entirely satisfactory. As surgeons, we might simplify matters by putting them all in two large classes, namely, those who will consent to operation, and those upon whom our persuasive efforts are lost. Then we could proceed to immediately lose interest in all except the former class.

Seriously, however, we will first mention the division made according to their duration, that is, the acute and the chronic. Under acute we have such inflammations as may appear in the course of other diseases, such as typhoid fever, diphtheria, influenza, etc., and also those caused by chem-

icals, such as iodine and the iodides. In this class also belong those temporary goiters that appear in young girls at puberty.

In the chronic class we have two main subdivisions, namely: First, the simple or non-toxic type, in which there is either a normal amount of glandular secretion; or there is an insufficiency of secretion, a condition of hypothyreosis; and, second, the exophthalmic, or toxic form where the secretion is excessive, and we have a condition of hyperthyrosis.

Goiters have also been divided according to their structure into nodular, colloid, cystic, fibrous, etc.

The exact etiology of goiters, in general, is yet a much disputed theme. Probably the most generally accepted theory is that they are caused by certain minerals in drinking water. On the other hand, there are those who believe that goiters are caused by bacterial infection. It is pretty generally recognized that heredity plays an important role.

The diagnosis of goiter is usually not difficult when the gland is much enlarged. With a small goiter, or a large intrathoracic goiter, however, we may have to base our diagnosis upon the symptoms, or X-ray findings. In diagnosis a determination of

the metabolic rate may be of great value. In a recent case, in which operation was being considered, the metabolic rate was found to be quite low, and, upon further search, a 4-plus Wassermann was secured and the case treated accordingly.

Generally speaking, the prognosis of goiters is exceedingly uncertain. Even such cases as appear during acute diseases, or in young girls, and which are generally considered as transitory, may remain permanent, or give rise to serious complications.

As to the best treatment of goiter there is yet much diversity of opinion. Some still contend that medical treatment is best, while others depend upon surgery. However, considering the notoriously unsatisfactory results obtained by medical means and the marked successes achieved by surgery, the surgical is rapidly becoming recognized as the treatment of choice. A perusal of current medical literature, or attendance upon clinics at our medical centers, afford abundant proof of this assertion. As Stuart McGuire recently said, "It is generally conceded that at present the safest, surest and most satisfactory treatment of hyperthyroidism is by surgery." The same statement holds good for many simple goiters as well. Of course where we have a condition of myxedema with goiter the medical treatment with preparations of the thyroid gland is indicated. Preparations of the pituitary and suprarenal glands have been used with some success, it is claimed, in selected cases. The X-ray and radium offer some aid, but their use has been found not only uncertain, but dangerous in some cases, and interfere with operation later, if that should become necessary. More or less permanent cures have been claimed for iodine, arsenic and various other drugs.

In considering simple goiters there are several indications for operation, namely:

1. Pressure disturbances. As the tumor enlarges, it may press upon the trachea, causing marked dyspnoea. Or a cystic goiter may suddenly hemorrhage, thereby

bringing on serious pressure symptoms. Pressure may cause various disturbances, such as difficulty in swallowing, hoarseness, cough, paralysis of the vocal cords, cyanosis or edema, according to whether the pressure is exerted upon the œsophagus, the nerves or the blood vessels, respectively.

2. Suspicion of malignancy, as suggested by rapid growth and pain.

3. As a goiter is by no means ornamental, the patient may demand operation for cosmetic effect.

4. The dangerous position of certain goiters, such as the lingual and intrathoracic types, may require removal.

5. Operation may be the only help in simple goiters where they bring on dilatation of the heart, nephritis and general anasarca.

When we come to consider the toxic type, or Grave's, or Basedow's Disease, so-called, surgery appears to offer our best hope of permanent cure. Here, too, however, various drugs and numerous extracts, such as "Thyroidectin," "Antithyroidin" and "Rodagen," have their champions.

After deciding upon surgery as our mode of treatment, we have a choice of several procedures, namely: (1) Simple ligation of one or more of the thyroid arteries, in the hope that it will decrease the secretion, or cause the goiter to decrease in size, or both; (2) Excision, removal of one lobe, or one lobe and the isthmus; (3) Resection, removal of part of one lobe, or part of both lobes; (4) Enucleation, separation of a discrete nodule, or cyst, from the thyroid tissue; (5) Exenteration, incision of tumor and evacuation of contents; and, (6) Simple incision of cysts. In emergencies, we may employ dislocation of the goiter, or division of the isthmus, or even tracheotomy.

The operation that most surgeons are employing at present is removal of one lobe, and probably, in the large majority of cases, also the isthmus. If we find after this operation that there is still too much secretion, we can remove a part of the second lobe

at a second operation. This is considered a better plan than to remove too much tissue at once and possibly be confronted with a condition of myxedema later. This view is not held by all surgeons, as some of them are advising the removal of one lobe, the isthmus and a large part of the other lobe at the first operation. One prominent goiter surgeon recently stated that, although practically all of the thyroid gland had been removed in many cases, so far as he knew there had been no authentic cases reported of myxedema, caused by operation.

The choice of an anesthetic is of importance. If the patient (or the surgeon) is very nervous, a general anesthetic is probably advisable. But, if the patient's heart, lungs and kidneys are not in good condition, a local anesthetic may be much safer. Because of the possibility of phonation under local anesthesia there is less danger of injury to the recurrent laryngeal nerve. Local anesthesia practically eliminates the danger of postoperative hemorrhage caused by vomiting. On the other hand, it may not be as easy to remove a large, adherent goiter under local anesthesia. Also, emergencies, that call for decisive and quick action, are best handled under general anesthesia.

CASE REPORTS.

For convenience, these cases will be divided unscientifically according to the predominating symptoms, and pathology, into small toxic, large toxic, and small non-toxic and large non-toxic.

Cases 1, 2, 3 and 4 came under the "Small Toxic" group. They all showed extreme nervousness, rapid pulse, and more or less choking sensation. Exhaustion upon trifling exertion was a well marked symptom. Number 3 was subject to repeated attacks of something like vertigo, so bad at times that she would almost fall. She was in such bad condition that we hesitated to operate, however, she stood the operation well under general anesthesia, which was used in all four of these cases. The results in these

cases have been quite satisfactory. The first one was done about six years ago, and the last something over one year ago. So far as I know the goiters have not returned in any of these cases. In none of them was the symptom of exophthalmos noted. In my opinion the term "Exophthalmic Goiter" is unfortunate, as there are so many cases where this symptom is absent.

Cases 5 and 6 are classified as "Large Toxic." Case 5 had a large goiter, about 4 inches in diameter. Her pulse was about 90 and very irregular at times. The choking sensation was so pronounced that she breathed with difficulty. Her heart was in such poor condition that I used a local anesthetic, about 3-4 of 1 per cent novocain. She stood the operation well, experiencing but little pain. There was immediate relief from the terrible choking sensation, and, when I last saw her, she said she was entirely free from the palpitation of the heart, and her pulse had fallen from 90 to 76. Case 6 was a large nodular goiter. Her heart symptoms were very distressing, her pulse running from 80 to 160, and there was some choking sensation. Exophthalmos was quite well marked. I removed the isthmus and three other nodules from the left side, these masses varying from about 1 to 2 1-4 inches in diameter. There was one other nodule far outward on the left and apparently others on the right, but, owing to the very weak condition of the patient, they were not removed. For a time she experienced much relief but it has not proven permanent. I feel now, however, that she will soon be entirely well for she has placed herself under the care of an expert chiropractor.

Cases 7 and 8 were of the "Small Non-toxic" type. They were practically free from symptoms, except a slight choking at times. They were both young women and sought operation largely for cosmetic effect. One was done under local and the other under general anesthesia.

Case 9 was of the "Large Non-toxic"

type. The tumor, which was about 5 inches long, with 1 3-4 inches lying behind the clavicle, was removed under local anesthesia. About the only symptoms it had ever given was a little choking sensation.

CONCLUSIONS.

The practice of making such long incisions in goiter operations is, I believe, absolutely unnecessary. My incisions vary from about 2 inches for the smallest goiter to about 5 inches for the largest. By using a subcuticular stitch for the skin incision an almost unnoticeable scar is left.

Why do we not have more goiter operations? For two main reasons, I believe; first, because the general public does not realize that goiter operations can be done successfully; and, second, because the physicians and surgeons have not paid sufficient attention to the subject. It is truly astonishing how few goiter operations are done in South Carolina. Take, for instance, our own city of Sumter. The late Dr. S. C. Baker did the first goiter operation done there. He did about five of these operations during his life-time. In the last 40 years there have been literally hundreds of major operations done in that city, and only about 15 goiter operations. It appears that about the same condition in proportion exists in most of the other cities of the State.

DISCUSSION OF PAPERS ON GOITER BY DOCTORS LITTLEJOHN, LEMMON AND EPPS.

Dr. Samuel Orr Black, Spartanburg:

I am sure that the Association enjoyed the three papers as read by the gentlemen from Sumter, and also the admirable discussions by Dr. Reeves and Dr. Guerry.

Thyroid symptomatology is a most interesting one. One of the earliest symptoms is an increased appetite, with a concomitant loss of weight. The patient eats more than is usual, yet they progressively lose weight, and tire easily.

A second early symptom is an increase in pulse pressure. There is almost always a difference in systolic and diastolic pressure of 40 or more points. This high pulse pressure is rather characteristic.

Metabolic study has added much to the accuracy of thyroid symptomatology, and gives a mathematical indication as to how fast the patient is living, as well as to the energy consumed in living. The Benedict apparatus, or the Sanborn Handl apparatus are sufficiently accurate for all practical purposes.

If there be a question as to whether the patient can stand a primary thyroidectomy it is far safer to ligate, under local anaesthesia, one or the other of the superior thyroid arteries, and watch developments. If this produces nausea, vomiting, very marked tachycardia or fleeting delirium, a thyroidectomy is out of the question, and the vessels of the opposite superior pole should also be divided and tied within a week or ten days and as soon as the patient reacts well from this second operation, he, or she, as the case may be, is sent home from two to three months. During this time the patient's pulse rate drops, they gain weight and strength, the nervousness subsides and they become operable.

There are several points about the surgical technique of which I would like to speak. In picking up the vessels, in controlling hemorrhage, pick them up longitudinally and not transversely. This lessens the liability of grasping nerve structures in the mouth of the forceps. Do not trim the thyroid tissue too close from the trachea; for by so doing, you irritate or bruise the trachea, this in turn causes edema of the intratracheal mucous membrane, and this edema produces a cough, most annoying at times.

There is no operation in surgery in which it is more essential to do a dry operation. Ligate all bleeding and oozing points, or else fluid accumulation will take place, and will surely cause difficulty in breathing and a hacking cough.

Dr. Robert Wilson, Charleston:

I wish to say a word in favor of a procedure which has been touched upon by one or two of the essayists, that is, the use of the X-Ray. My own impression is that the X-Ray is a very valuable agent in the treatment of these cases. I do not mean that it will effect a cure, but I have seen some very remarkable results from its use; the symptoms being markedly improved and the metabolic rate lowered. I believe that we have converted seeming inoperable cases into operable cases by this means. I usually employ the X-Ray before

advising operative procedure, and I believe that in this way I have secured better results than by prolonged medical treatment.

Dr. H. M. Stuckey, Sumter:

I wish to report a case and then ask a question. In February a young man in Clemson College had the flu. He afterwards had a relapse and was brought home. Then he had an abscess of the thyroid gland, which the doctor who attended him said was a tremendous thing. It was opened up and was healed. The young man never recovered enough to go back to school, and it happened that during his physician's absence I was called to treat him. From his appearance I at once suspected diabetes, and I took a specimen of his urine and found it loaded with sugar. He died within twenty-four hours. I wish to ask if the thyroid abscess had anything to do with the diabetic condition.

Dr. William Allen, Charlotte, N. C.:

This very excellent discussion of goiter has laid stress on the determination of the metabolic rate; such determinations seem to me to have three functions. In the first place, they help to differentiate between hyperthyroidism and effort syndrome and tuberculosis. In the second place, when surgery is contemplated, it is important to determine the metabolic rate because it has been shown that cases in which metabolism is steadily increasing are very poor surgical risks. In the third place, after removing the thyroids in Grave's disease, or after treatment with X-Ray, the determination of the metabolic rate gives you some idea as to whether or not you have reached the proper end point.

Manipulation of metabolimeter is very simple, but it is by no means always easy, in nervous patients, to feel sure that you are really getting the base rate.

Dr. Robt. Wilson, Jr.:

Dr. Stuckey asked a very interesting question. Hyperthyroidism is one of the conditions which cause glycosuria. I have noticed in one or two of my cases the condition to which Dr. Stuckey has referred, and one of my cases developed diabetes and died in coma. Just what the relationship is I can not say, and I feel that we do not know enough about endocrine conditions as yet to give a positive answer.

Dr. W. F. R. Phillips, Charleston:

I notice particularly that we have talked about the disease and about its treatment, but not one word of etiology has been said. But if we are to treat the disease, we must know how it comes about.

In last week's "Science" there appeared a contribution that bears somewhat upon the etiology of thyroid disease. It was written by Clendon, of the Physiological Laboratories of the University of Minnesota. He called attention to the atmospheric distribution of iodine, and that there is a minute trace of iodine to be found in the air, and that, with regard to the United States, this trace is much heavier, in the coastal plains and diminishes toward the interior and the lake region. He threw out the suggestion that there is a deficiency of iodine in food substances if there be no iodine in the air, and that the geographic distribution of goiter might depend upon the amount of iodine in the air. An interesting thing to us is the distribution of goiter. One of the gentlemen here said that there were few operations for goiter in Sumter, I believe. Do we know whether or not thyroid disease is more common in South Carolina than in the Northwest? Do we know whether it is less frequent? Here is an instance in which the clinical study suggested by the Committee on Scientific Work might be carried out.

Another thing is that every one, in talking about hyperthyroidism, has mentioned disorders of menstruation, etc., but no one has mentioned the fact that the thyroid and the gonadal elements are connected with each other. The late William H. Gaskell, in his work, "The Origin of Vertebrates", has advanced a most interesting hypothesis. He derived vertebrates from that class of the invertebrates in the oral cavity of which are not only the thyroid but the gonadal elements also. According to Gaskell, in the subsequent evolution of the vertebrates the gonadal and part of the secretory elements were removed to the caudal pole, while the thyroid element remained at the cephalic pole. This hypothesis gives us a rational explanation of the intimate relationship between the functioning of the thyroid and the urogenital organs.

Dr. F. B. Johnson, Charleston:

There is one point in the diagnosis of thyroid conditions which has not been mentioned, and that is the glucose tolerance test.

In hyperthyroidism we have produced quite a marked hyperglycaemia, appearing in the first hour and which may last some while gradually falling. In hypothyroidism there is an entirely opposite condition. The blood sugar is below the normal figure, does not even show the normal rise in the first hour, but there may be a slight rise after three hours. This is a point which I think is often of value in the diagnosis of these conditions.

Dr. Addison G. Brenizer, Charlotte, N. C.:

These papers and the discussions have been extremely interesting to me. I have been doing some goiters for the last ten years, and I am interested in the subject. I think that goiter is a bad term, particularly for the hyperthyroid cases and for cases that occur during puberty and during the menopause. The size of the thyroid gland and the accumulation of watery colloid depend upon the amount of iodine circulating. One author spoke of that as a colloid goiter, at puberty and during pregnancy. This is quite

different from hyperemia of the thyroid gland, which occurs before puberty and after the menopause, and which is probably due to some deficiency of the corpus luteum. Goiter probably is not the best term, especially exophthalmic goiter, as sometimes the goiter may be very small and very active without this symptom. We might use thyrotoxicosis or Grave's disease, or some of the other terms.

Some one mentioned a case in which abscess of the thyroid gland followed flu. Abscesses of the normal thyroid gland are very rare, but abscesses of the goiter are not infrequent at all.

There has not been mentioned here cancer of the thyroid, of which there are several types. The usual one is carcinoma of the thyroid, grafted on a goiter of long standing. Out of 470 cases which I have had, I have recognized only one case of cancerous adenoma. Cancer of the thyroid gland should certainly be kept in mind, and if a woman after the menopause has an adenoma which begins to grow rapidly it should certainly be treated as a carcinoma of the thyroid gland.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

THE DIAGNOSIS OF CYSTITIS

In cystitis, there is an inflammatory change in the bladder, either generalized or in localized areas. This change is usually in the bladder mucosa, but may involve the submucosa or the muscular wall.

The diagnosis of cystitis is much abused. The presence of the three cardinal symptoms, namely: pain, frequency of urination, and pyuria is not sufficient evidence to arrive at a diagnosis of cystitis. Certain forms of cystitis exist without the finding of pus in the urine. This is seen in the Hunner or submucous ulcer, which frequently produces an intractable form of bladder irritability.

Pain, frequency of urination, and pyuria

may exist without any inflammation of the bladder. This often occurs in various infections of the kidney, such as pyelitis, pyonephrosis, pyelonephritis, either simple or with stone or tuberculosis. This also occurs in infections of the prostate, seminal vesicles and posterior urethra.

Chronic disease of the prostate, seminal vesicles, posterior urethra, urethral caruncle, polyp, cystocele, pelvic tumors, and urethrocele frequently cause marked bladder irritability, without necessarily finding pus in the urine. Hyperemia of the trigone (without bladder inflammation, is a very common cause of bladder irritability. Bladder irritability from these causes is not necessarily nor usually a cystitis.

A primary cystitis, or a cystitis per se,

rarely exists. The inflammation is almost always secondary to a lesion in some other part of the urinary tract, and if in the bladder, is attributable to stone, tumor, diverticulum, or foreign body. Infrequently, syphilitic ulcer of the bladder is responsible for cystitis.

In women, 80 per cent of the cases of cystitis are secondary to a pyelitis. The bladder symptoms are frequently, in cases of pyelitis, the most conspicuous ones present. So then, renal infection is the most common cause of cystitis. This infection may also be a pyonephrosis, pyelonephritis, either simple, or with stone or tuberculosis. Cystitis may follow inflammatory diseases of the prostate, seminal vesicles, posterior and anterior urethra, obstructive lesions at the vesical neck, such as prostatic hypertrophy, contracture of the vesical neck and median bar formation, causing residual urine. Spinal cord disease may cause residual urine and thereby produce a cystitis. The cystitis of pregnancy, and following operations is practically always secondary to a pyelitis or some other renal infection.

In all cases of bladder disturbances, the underlying cause should always be sought. The existence of acute prostatitis and seminal vesiculitis can readily be ascertained by rectal examination by palpation of the enlarged and tender prostate and vesicles. Massage will express out thick purulent material. In chronic disease of the prostate

and vesicles the three glass test will aid to clear up the diagnosis. The third glass is always clear, while in the lesion higher up in the tract, it will always be cloudy. The finding of pus cells in the discharge obtained by massage and the use of the endoscope will usually enable us to make the diagnosis. The presence of pelvic tumors, cystocele, urethral caruncle, polyp and urethrocele do not often offer any difficulty in diagnosis.

The use of modern urologic methods is almost always indicated in all cases of cystitis. Surely, those cases that do not clear up entirely within about ten days time should be cystoscoped and if the trouble is not located in the bladder inspection, the ureters should be catheterized. It must be borne in mind that renal infection, cystitis, posterior urethritis and prostatitis frequently coexist and the condition will not clear up until the renal infection is removed. This almost always requires, in addition to any other measures, ureteral catheterization. Lavage of the renal pelvis with appropriate antiseptic is also usually indicated. In those cases of cystitis secondary to renal infection, brilliant results usually follow ureteral catheterization and lavage of the renal pelvis, or if the kidney has already been practically destroyed the removal of the cause by surgical measures will cure the cystitis.

CORRESPONDENCE

Dr. Edgar A. Hines,

Seneca, S. C.,

Dear Dr. Hines:—

July 29, 1922.

I thought it best to write you pointing out an error made by the printers in my article on sacral anaesthesia which appears in the last issue of the journal.

In the formula for the novocaine mixture

it should be Sod. Bicarb. (C. P.)-15 gms and not 15 gms. Here the error is in the multiples of a hundred and could result in some serious trouble.

Hoping that you will pardon my taking the liberty to point this out to you for I felt that it should be done, I am

Yours very truly,

James J. Ravenel, M. D.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

THE CINEMATOGGRAPHIC ACADEMY OF MEDICINE

Elden, in the International Journal of Surgery, June 1922, writes at considerable length on the formation of a Cinematographic Society, composed of medical men and motion picture producers for the purpose of visual demonstrations of the newer things in medicine and surgery, as well as for the purpose of simplifying the art of teaching, in a measure, thus substituting visual for oral procedures.

This is unquestionably an epoch making venture and is worthy of consideration by all thinking men of the profession.

Elden states that heretofore, in this country, the one thing that has retarded the development of this process, has been the exorbitant charge demanded by the producers, the average cost ranging from \$1.50 to \$3.00 per foot to produce ordinary films. However, he and his associates with their staff and machines are now prepared to do the same work at the very nominal charge of twenty-five cents per foot.

Elden insists that the picture to the eye can get the information over more quickly, concisely and accurate than can the teacher to the ear. He says that text-books are laborious, that teaching is at best a slow art, that the success of the proposition lies in the effective cooperation between producers and medical men, that is by bringing them together on common ground, to meet the demand of the profession in an ethical and efficient manner.

The Germans in 1877 first used the motion picture as an aid to teachers and lecturers, and to date they have carried it fur-

ther than has the profession in any of the other countries.

In 1908 an apparatus was installed in one of the London Hospital operating rooms for the purpose of recording and projecting pictures, and in 1911 a young French Student adopted the idea and carried it thru in great style, revealing the intricate movements of various organs of an animal's body, as well as phagocytic action as seen under the microscope.

In America, Dr. W. G. Chase, of Boston in 1905 used the motion picture to reveal the entire phenomena of an epileptic attack from beginning to end. Since then the federal government as well as certain individuals of outstanding prominence have resorted to it with gratifying results, and now Elden and his co-laborers, thru the Cinematographic Academy of Medicine, propose to work out a standard course of study and to establish a central library of cinematographic productions in New York City. The society, or academy, will be equipped for private or group study, and members, societies and institutions at a distance may either rent or purchase duplicate copies of any subjects in the main library.

In addition the Society will issue a "Current Events" periodical, revealing all new modifications, techniques, appliances, etc., and in this way further disseminate the good work of the organization.

One of the most important provisions is the arrangement whereby a large membership will be secured, the dues being \$5.00 a year, and the society will undertake to produce for any member cinematographically, anything he wishes of an original nature, which will be of interest and advantage to the profession at large.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
Superintendent State Training School,
Clinton, S. C.

"MANIC-DEPRESSIVE INSANITY"

One of the common types of insanity under which may be included Mania, Melancholia and Circular Insanity. Two distinct phases are noteworthy—the excitable or exalted phase and the depressive phase. Either one may be first, or only one phase may occur. The manic or the depressed phase may vary greatly both in duration and intensity. Characteristic symptoms of the manic stage are: accelerated flow of ideas hyperactivity and disturbances of the emotions. The depressed phase is commonly manifested by slowness of thought, emotional depression and diminished activity. All of these symptoms may be present in several other types of mental trouble, and it is not uncommon for an experienced psychiatrist to reverse his decision after having a patient under observation awhile. A history of previous attacks with recovery and no obvious deterioration is suggestive of this disease. It is not easy to take any of the signs mentioned and make an accurate diagnosis in quite a number of cases. Well defined cases are not difficult but many are not so clear cut. Dementia Precox is the most probable disease with which it may be confounded. Excitement is common in either disease—likewise depression. The precox excitement is more of a blind type, not showing evidence of reason or coherence.

Usually in the excitement of a manic one can observe that the patient's ideas and actions are being directed toward the accomplishment of some end or purpose. There are things in his environment which often suggest a stream of ideas that he touches upon. Likewise the depression may be thought to be the stupor of a precox. If

there is much depression in the manic-depressive case the patient often shows mental suffering and anxiety. Usually they can be aroused to speak slowly and softly. One may see tears trickle down their cheeks while they are attempting to answer a question. Delusions are not uncommon in both manic-depressive and dementia precox cases. In manics they are usually loose and transitory and are apt to be self-accusatory during a depressed phase. They are more fixed in precox cases.

The depression of the manic-depressive may be confused with Involution Melancholia. Involution Melancholia, which occurs after middle life, there is great depression, anxiety or grief, but a lack of slowness down or retardation so common during a depressed phase of a manic depressive. The depression or stuporous attitude of dementia precox is usually accompanied by mutism and negativism.

Several years ago the percentage of manic depressive insanity was supposed to be very much higher than any other mental disease. It is doubtful whether it will rank much higher than dementia precox in the more recent statistics. The prognosis for recovery is good. Recurrent attacks common. In some cases one attack seems to predispose toward another. Hereditary percentage is very high. Strain and domestic troubles are common precipitating causes.

During intense excitement the cardiac muscles may fail, or the pressure of activity may lead almost to starvation. This renders the patient more liable, of course, to intercurrent diseases. During depression the loss of appetite and the lack of mental vigor are apt to cause considerable bodily wasting. Suicide does occur during the depression

and might possibly occur more often if the patient were not so profoundly retarded that they are unable to operate sufficient will

power to perform the act.

Treatment, preventive or institutional.

PATHOLOGY AND BACTERIOLOGY

H. H. PLOWDEN, M. D.,
Medical College of the State of South Carolina,
Charleston, S. C.

POST-MORTEM EXAMINATIONS

When one considers the exceptional opportunities for reviewing the study of anatomy and also for acquiring dexterity in surgery, it is remarkable that almost everywhere there is so much indifference to the performance of autopsies. They are indispensable to the teaching of Pathology, and frequently death certificates are not correctly signed because an autopsy has not been performed. In routine hospital practice, especially in charitable institutions, the opportunity for post-mortem examinations is one not to be overlooked.

In the performance of post-mortem examinations, the acquisition of exact data is the end to be attained; therefore, the procedure should be scientific and systematic. This is of special importance in medico-legal cases, but should not be dispensed with in the ordinary case. For without it, details of the greatest importance may be overlooked or the information obtained may be so ill arranged as to be practically valueless for statistical or demonstrative purposes.

When a post-mortem is wanted, the first step in all cases is to secure permission for it. Here is the stumbling block in about 50 per cent of all cases, for permission is refused in about one of every two requests. This situation calls for education of the people as to the value of the procedure; it certainly calls for an effort on our part to dispel the impression in many minds that the performance of a post-mortem examination will greatly mutilate and disfigure the body.

There should be a law permitting post-mortem examinations of the bodies of all persons dying in charitable institutions. Such law is written in Germany and also in a few other countries and localities. Before any such law can be passed in this country, a campaign of education as to the value, the innocence, and importance of post-mortem examinations will have to be instituted. And then the facts must be presented with care, and in such manner that no misunderstanding of the procedure can arise in the minds of even the most ignorant.

PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

TYPHOID FEVER—A SANITARY INDEX.

In the light of our present knowledge concerning the etiology of diseases, there seems very little excuse for the existence of Typhoid Fever among civilized communities.

We know that Typhoid Fever is a human disease caused by ingesting the Eberth-Gaffky bacillus from some of the discharges of a Typhoid patient or carrier.

That human feces—even in microscopic doses—is not a proper article of diet, is a fact one would suppose, that would be readily recognized by the average individual.

The reporting however, of nearly four hundred Typhoid deaths each year in South Carolina—with the presumption of at least ten times that number of cases—shows us the fallacy of such a presumption; and makes us stop and question the real extent of our progress since so called dark ages.

Solace may be found in the fact that this disease is slowly but surely surrendering its place as a destroyer of human life; and its hold upon humanity is relentlessly being broken by the onward march of civilization.

Modern advancement has no place for Typhoid Fever, and the relative absence of this disease in a community is a very good index to its civilization and progress. No modern city can be classed as such, as long as its Typhoid rate is abnormally high.

Statistics gathered by the Metropolitan Insurance Company a few years ago disclosed the fact that tuberculosis is between three and four times more prevalent among persons who have had Typhoid Fever than

among those who escaped the disease; and the Mills-Reinecke phenomenon—which demonstrates that the sanitary measures which prevent a death from Typhoid Fever will at the same time prevent at least two deaths from other causes—fully emphasizes the economic value of Typhoid prevention in a community.

While sanitary living conditions in the United States, as a whole, have been very much improved—so that the Typhoid death rate dropped from 49.6 per 100,000 population in 1906 to a trifle over 12 per 100,000 in 1920—South Carolina may still be considered a Typhoid State.

It is true that we have just cause for pride in the fact that our death rate from Typhoid Fever is steadily declining—our 1920 rate was 18.7 as compared with 30.7 in 1918—we have still a great deal to do in a sanitary way before we can begin to compare figures with other states.

In analyzing our Typhoid statistics, we find the mortality and morbidity rates of a community decline in direct ratio to the amount of sanitation accomplished; and while all other factors being equal, our rural Typhoid rates have always heretofore been higher than the urban, the introduction of Rural Sanitation in a few of the Counties in our State have brought the sickness and death rates from Typhoid Fever in those Counties down on a level with—and in some instances even lower than—the more densely populated towns and cities.

If you want to learn exactly how much Sanitation is being carried on in a Section, City or State, consult its Typhoid figures.

SOCIETY REPORTS

PROGRAM SECOND DISTRICT MEDICAL ASSOCIATION OF SOUTH CAROLINA HELD IN COLUMBIA JULY 19TH. AT 10:30 A. M.

No. 1—"The Significance of Little Things", W. P. Timmerman.

No. 2—"A Plan to Enlist the Co-operation of the General Practitioner with Public Health Work", J. A. Hayne.

No. 3—"The Spinal Fluid in Syphilis", H. M. Smith.

No. 4—"South Carolina's High Infant Death Rate", W. P. Cornell.

No. 5—"The Relationship of Pyorrhea to General Surgery", Geo. H. Bunch.

No. 6—"Reminiscences of the Country Trephine", T. H. Dreher.

No. 7—"Granuloma Inguinalea", J. Richard Allison.

No. 8—"Maternal Mortality in South Carolina", Robert E. Seibels.

LEXINGTON COUNTY

The Lexington County Medical Society met at Lexington, Monday, July 3rd at 11 o'clock with Dr. Carl B. Able in the chair.

The following members answered to roll call: Drs. Carl Able, A. L. Ballenger, W. Price Timmerman of Batesburg; R. E. Mathias of Irmo, J. J. Wingard and J. H. Mathias of Lexington, and the following physicians visiting:

Drs. N. B. Edgerton, S. E. Harmon and Floyd Rodgers of Columbia, and S. J. Black of Saluda.

The minutes of last meeting were read and approved.

Dr. Edgerton read a very interesting paper on Kidney and Bladder diseases giving in detail the symptoms and treatment.

Dr. Rodgers read a paper on X-Ray and

Radium, going in detail of their uses in diagnosis and treatment.

Dr. Harmon gave a paper on Infantile Intussusception taking up principally the symptoms and operative treatment.

After dinner the society reassembled and went into general discussion of various diseases.

The next meeting will be held in Batesburg. J. H. Mathias, M. D., Secretary.

NEWBERRY COUNTY

Date of Meeting July 14, 1922. Dr. J. M. Kibler in chair.

Roll call, number present 10; number on roll 19. Minutes read and approved.

Dr. W. A. Dunn reported a case of Typhoid Fever in a child of three months. Mother also had typhoid. Dr. W. G. Houseal reported a case of typhoid fever in child of eighteen months. Typhoid fever comparatively rare under five years. Several cases of typhoid fever are now in the city and the country. The doctors present reported a list of delinquent accounts and methods and means of collecting. Same discussed.

Dr. Knotts of Newberry Public Health Unit reported seven hundred complete inoculated persons by the Clinic since June 1, 1922. Thanked the doctors and rural communities for their cooperation. He spoke of the importance of State and County Hospitals for Tuberculosis and the needs for state aid for same. The State Tuberculosis Hospital has only twenty-eight beds white and twenty-eight beds for colored people and nearly that number die each year T. B. in Newberry county. Examination will be made of the school children in the Fall and children referred to their physicians.

J. K. Wicker, M. D., Secretary.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

DER EPITHELIOMES PRIMITIFS DE
LA PEAU.

ANNALES DE DERMATOLOGIE ET-
DE SYPHILOGRAPHIE.

Dr. Darier the eminent French Dermatologist who for thirty years has been a close student of skin cancers in this article makes a new classification of skin cancers which explains some of the problems we have in diagnosing and treating these conditions. He describes briefly the three methods of the experimental production of cancers of the skin: by X-ray; by a parasitic animal the spirorthera neoplastica according to the experiments of Fibiger of Copenhagen who produced typical skin cancers on white rats; and finally by tar bandages as described by Japonais.

He leaves out Sarcoma and divides the others into three types instead of the usual two types described in this country. I. L'epitheliome spino-cellulaire, commonly called the prickle cell or squamous cell carcinoma. This type comprises about 50 per cent very malignant, gives metastases, and causing death in from 18 months to 3 years. It is very resistant to X-ray and Radium.

II. L'epitheliome baso cellulaire. Commonly called baso cell carcinoma or rodent ulcer. Comprises about 30 to 40 per cent. More common on the upper 2-3 of the face. It develops on senile keratoses, scar tissue, and as a result of constant irritation. The clinical aspect of this type is varied, so much so that he described five types of

the basal-cell cancer. (a) Plain cicatrical which develops on the edge of a scar as a ring of small papules like perles. (b) The Pagetoide so called on account of its resemblance to Padgets disease. (c) Pimply type which starts as a small papule and may grow to the size of a walnut. (d) The Rodent ulcer a serpiginiuous ulcer that is slow in its growth, may extend over a period of forty years. (e) The undermining ulcer which invades the cavities of the face and often kills by haemorrhage. These five types are grouped under the one heading on account of the similar histological structure, their inability to give metastases and their peculiar susceptibility to X-ray and Radium Therapy.

III. The third type is an intermediary or a combination of the two, which he calls the Epitheliome Metatypique, the spino-baso-cell carcinoma comprises 10 to 15 per cent, occurs about the face, nose, neck and hairy skin; clinically it resembles the baso-cell carcinoma. The diagnosis is made on the histological structure which seems to have characteristics of both the spino and baso-cell carcinoma. It is very resistant to X-ray and Radium Therapy.

It is essential to distinguish the three types of skin cancers on account of the prognosis and the selection of the best method of treatment. He advises total excision for the 1st and 3rd. types. We claim in this country a cure in 90 per cent of the baso cell type. It is very probable that this 10 per cent failure may be due to the fact that we are dealing with this 3rd. type of skin cancer so aptly described here.

MINUTES

MINUTES OF THE HOUSE OF DELEGATES, SOUTH CAROLINA MEDICAL ASSOCIATION, ROCK HILL, S. C., APRIL 19, 1922, CONTINUED.

The report of the Committee on Public Policy and Legislation was read by the Chairman, Dr. A. E. Boozer, of Columbia.

Dr. Robert Wilson, Chairman of the State Board of Health, presented the report of the State Health Officer.

Upon rising to make the report of the Committee on Health and Public Instruction, Dr. F. A. Coward, the Chairman, announced that the moving picture theatre near the Carolina Hotel would run, during the meeting of the Association, a film (not an advertisement) put out by the Squibb Company, showing the care of laboratory animals, how to make the Schick test, and other interesting features of laboratory work. He stated that it was due to the energy and diplomacy of Dr. J. R. Miller that arrangements had been made for having the film shown. Dr. Coward then read the report of the Committee.

Dr. Ernest Cooper, Chairman, of Columbia, reported as follows for the Committee on Study and Prevention of Tuberculosis:

"The deaths from tuberculosis in 1921 showed a decrease from former years, and it seems that we may hope that the words of Pasteur will be borne out, that 'it is within the power of man to banish all infectious diseases', and that tuberculosis will soon disappear along with typhoid fever, yellow fever, and malaria. At the South Carolina Sanatorium we have 76 beds at present, with an appropriation of \$10,000. With the erection of another building we hope to have 24 more beds. During the year, in co-operation with the county health units and the town health boards, the Sanatorium has held clinics at the following places: Mullins, Hartsville, Darlington, Newberry, Winnsboro, Anderson, Ware Shoals, Belton, Honea Path, Chester.

At the last meeting of the American Medical Association, it was recommended that all general hospitals make provision for the care of tuberculous patients. This indicates a decided change in the attitude towards the

tuberculosis as is a great advance in efforts to eradicate the disease.

(To be continued)

REPORT OF STATE BOARD OF HEALTH

The President and Members of the House of Delegates:

The report of the State Health Officer for 1921 indicates a general increase in the efficiency of each department notwithstanding a decreased appropriation for public health work by the General Assembly.

The general death rate shows a decrease while the birth rate has increased over the previous year. In 1920 the death rate was 14 and the birth was 27.2 per 1,000 of population, and in 1921 the death rate had fallen to 11.8 and the birth rate had risen to 28.3 per 1,000 of population.

The most striking and impressive improvement is in the death rate from malaria which in the last six years has fallen as much as 50 per cent. In some localities the malaria control work has shown extraordinary results. In Bamberg, for example, 1087 cases were reported in 1919 entailing an economic loss of \$35,871, while in 1921 20 cases were reported with an economic loss of \$1,000. In Chester 411 cases were reported in 1919 and the estimated economic loss was \$21,154, while in 1921 only 2 cases were reported with an economic loss of \$100.

The Bureau of Child Hygiene under the directorship of Mrs. Ruth A. Dodd is achieving definite results. The death rate from pregnancy and parturition shows a decrease of about 14 per cent over the previous year. Among children under 10 years of age the improvement has been very striking showing a decrease of 317 among white and of 779 among colored children. The number of nurses engaged in field work varied from 38 to 42, and their activities included beds of care of the sick, the carrying on of a baby campaign, the instruction of classes of midwives, the physical inspection of school children, the promotion of corrective school hygiene clinics, the conducting of tuberculosis surveys and free tuberculosis clinics. Work

among the negroes has been conducted by Ellen Woods Carter in Florence, Sumter and Marion counties with good results.

The Venereal Disease control work was carried on vigorously by Dr. C. V. Akin and the State Health Officer expresses the opinion that this activity will "contribute perhaps more than any other factor in reducing the mortality rate in South Carolina." The appropriation for the continuance of this work was discontinued by the General Assembly at the last session.

The Director of the Hygienic Laboratory reports "a substantial increase in all lines of work." It is worthy of note that the Wassermann tests exceeded those of the previous year by 2,225, but that the positive results were fewer by 1,035. This may perhaps indicate that the anti venereal work is producing results, and it certainly shows a growing appreciation of the diagnosis value of the test.

The Pasteur treatment shows an increase, 767 persons having received it, which means, as the Director says, that at least two persons were bitten by rabid animals every day throughout the year. No failures of immunization were reported.

Fifty-six thousand eight hundred and seventy-one ampoules of typhoid vaccine were distributed being the largest annual output since the laboratory has been in operation.

No department has rendered more efficient service than the Bureau of Vital Statistics, which is conducted more economically than in any other state, the per capita cost being only three mills. The report of the Bureau shows that the death rate in South Carolina in 1921 was as low as 11.9 per thousand, the birth rate 29.

The Department of Rural Sanitation notwithstanding a two thirds reduction in the appropriation, has done most excellent work. The educational work of the Department included 511 lectures, 255 talks to school children and 19,601 houses visited besides the distribution of literature, circular letters and carrying on an extensive correspondence. 32,562 vaccinations against smallpox, and 12,903 typhoid inoculations were made; 14,757 school children were examined of whom 7,198 were found defective. The Department exercises supervisory control over the following counties: Charleston, Cherokee, Darlington, Fairfield, Greenville, Lee, Newberry and Orangeburg, and other counties are preparing

to organize health departments.

The Sanitary Engineer reports "considerable activity on the part of municipalities, mills, schools and other institutions along the lines of water supply, sewerage, and sewage disposal." Many towns and mills have consulted this department with reference to putting in new systems or modifying existing systems, indicating a growing appreciation of its value. The engineer has been called into 42 of the 48 counties of the state during the year which shows the state-wide range of his activities.

The State Hotel Inspector has visited every hotel and restaurant in the state at least once and many of them have been visited several times. Four hotels were closed on account of noncompliance with regulations. The good results of the activities of this work are already manifested by an improvement in sanitary conditions in hotels throughout the state.

The sanatorium for the treatment of tuberculosis continues to render efficient service as far as its limited capacity will permit. A waiting list of fifty sufferers makes an eloquent appeal for enlarged facilities. Since the last annual report 110 patients have received treatment of whom 52 were women and 58 were men. Of these discharged 8 were apparently arrested, 3 quiescent, 13 improved and 19 unimproved. An important addition to the work at the institution has been the establishment of a dental clinic conducted by Dr. P. D. Brooker, who reports finding the patients "almost without exception handicapped by the presence of foci of infection, some of them with many such diseased teeth and many suffering from extensive pyorrhea." The value of this work needs no comment. Another admirable innovation which was begun only in November is occupational therapy under the direction of Miss Katherine Heyward. Only a beginning has been made, but this beginning promises to develop a most useful field of work.

Special comment should be made upon the work of the State Epidemiologist. This official has visited every county and nearly every town in the state investigating outbreaks of contagious diseases, and it has been mainly through his efforts that a threatened epidemic of smallpox has been suppressed.

Contagious Diseases.

Smallpox—Approximately 155 cases were reported, and there were doubtless many un-

reported cases. 135,000 vaccine points were distributed.

Scarlet fever—Only four deaths occurred, most of the cases being of mild type.

Diphtheria—This disease is still on the increase, 117 deaths occurring in 1921 against 97 during the previous year. This makes the death rate 8.3 per 100,000 of population. The toxin antitoxin immunization has been demonstrated to be of the greatest value and we earnestly hope that its use will become more and more general throughout South Carolina.

Measles—A slight increase in prevalence has been noted.

Whooping-cough—A definite improvement has taken place, 82 deaths being reported against 182 during the previous year.

Cerebro-Spinal Meningitis—29 deaths were reported from this disease, 30 having been reported the previous year.

Typhoid Fever—310 deaths were reported against 262 during 1920, an increase which indicates an unfortunate lack of sanitary intelligence.

Tuberculosis—There were 1270 deaths as compared with 1337 during 1920. The death rate among the whites was 47.8 and among the negroes 131 per 100,000 of population. The great need for larger facilities already alluded to is further emphasized by the Health Officer's estimate that we provide one bed for thirty deaths.

REPORT OF THE COMMITTEE ON PUBLIC POLICY AND LEGISLATION

The Committee on Public Policy and Legislation begs to submit to the South Carolina Medical Association the following report: for the year 1921-22. The following extract from letter of Secretary Hines dated Columbia January 14 th. was received by the committee: Columbia on Monday night, January 9th. "At a special meeting of the Council held at Columbia on Monday night January 9th the matter of legislation as affecting the State Board or Health was discussed. The Council instructed me to write to your committee to take immediate steps towards protesting against the election of the members of the Executive Committee of the State Board of Health by the Legislature or their appointment by the Governor. Also to protest against the removal of the South Carolina Tuberculosis Sanatorium for both whites and negroes from the jurisdiction of the State Board of

Health to that of the Board of Public Welfare." The Committee immediately took steps to see members of the Legislature relative to these points and we are glad to report that none of these contemplated changes which we deem so hurtful to the medical interests of the State were put into effect.

The only other important work of the committee was to defeat the effort of the Chiropractors of this State to put through the Legislature the following: H. 950. * *Mr. Leopard. A Bill to regulate the practice of chiropractic in the State and to create a State Board of Chiropractic Examiners and define their powers and duties. Our fight against this bill was even a more stubborn one than that experienced two years ago, but thanks again to the splendid cooperation of the physicians over the State in their response to every appeal sent out by the committee working in Columbia, the medical interests of the State triumphed again, due largely to the skillful leadership of our friend Dr. E. H. Barnwell of Charleston who worked untiringly to protect our interests as well as the people of the State. On March 7th. the bill was killed by a vote of 39 to 19, the House Journal recording that Messrs. Kennedy of Union, Hanahan of Fairfield, DeTreville of Colleton, Barnwell of Charleston, and Lancaster of Spartanburg spoke against the Bill. Messrs. Sapp of Richland and O'Rourke of Charleston spoke in favor of the Bill.

Respectfully submitted,

P. A. Williams, M. D.

A. Earle Boozer, M. D.

Chairman.

REPORT OF COMMITTEE ON HEALTH AND PUBLIC INSTRUCTION

Mr. Chairman and Members of the House of Delegates:

This Committee offers no apologies for submitting what may be considered an apology for a report of its work during the past year. The matters of legislative, educational, and public health work which are of interest to this body are thoroughly well covered by other committees, whose reports you have heard, or shortly will hear. South Carolina, with one possible exception, stands unique in the U. S. A. in that her State Medical Association is her State Board of Health, in that her health matters are directly invested in an Executive Committee, selected from that body, and that

through its various subdepartments, this Executive Comm'ttee directs all public health instruction of any value, with the exception of that done by the Medical College and the Board of Medical Examiners.

Th's Committee on public Health and instruction stands with us therefore merely as a titular adopted child of the model constitution suggested by the A. M. A. some years ago. It has no place in our present organization.

A former president of the South Carolina Medical Association, upon being asked what he considered the duties of the Committee,

replied that it had none. The incumbent president of the Association in reply to a similar question replied that the duties of the Committee were to observe and advise. It is the opinion of the present Committee that it is a superfluous Committee, bearing name but not authority and that its abolition is desirable.

Signed,

Dr. F. A. Coward, Chairman.

Dr. D. B. Frontis,

Dr. E. C. Doyle,

BOOK REVIEWS

THE SURGICAL CLINICS OF NORTH AMERICA (Chicago Number JUNE 1922. The Surgical Clinics of North America (Issued serially, one number every other month). Volume 11 Number 111 (Chicago Number June 1922) 289 pages, with 89 illustrations. Per clinic year (February 1922 to December 1922). Paper \$12 00 net; Cloth \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Some of the best articles in this number are the following:

Clinic of Dr. Albert J. Ochsner, Augus'ana Hospital Removal of Renal Calculus from Pelvis of Floating Kidney, The Second Kidney being Absent, page 593.

Clinic of Dr. Allen B. Kanavel, Wesley Memorial Hospital Retropharyngeal and Posterior Mediastinal Abscesses, page 603.

Clinic of Drs Arthur Dean Bevan and James C. Gill, Presbyterian Hospital, Endthelioma of the Spinal Cord, page 695.

Clinic of Dr. Arthur Dean Bevan, Presbyterian Hospital, Carcinoma of the Stomach: Resection by the Second Billroth Method page 717.

Two Cases of Common Duct Obstruction, page 725.

Clinic of Dr. Carl Beck, North Chicago Hospital, Stricture of Small Intestine (Intestinal Obstruction Meckel's Diverticulum), page 753

Clinic of Dr. Rawson Pennington, Columbus Hospital, Hemorrhoidectomy by the "Open" Method, page 837.

Clinic of Dr. Carl B. Dav's, Presbyterian Hospital, Two Cases of Ileosigmoidostomy, page 879.

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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

PEDIATRIC SEMINAR A SUCCESS

One of the most promising developments for the progress of Pediatrics in the South is now in it's second year at Saluda, and Black Mountain, N. C.

Drs. D. L. Smith, and F. H. Richardson originated the idea. A faculty of about thirty of the best Pediatricists of the South, give lectures and hold Infant's and Children's clinics at the children's hospital at Saluda, N. C.

Nutritional clinics are held at Black Mountain also. It is intended to make this one of the great Post-graduate schools of the South.

ERROR IN PAPER, AUGUST JOURNAL

The caption to the excellent paper "Basal Metabolism as an Aid in Diagnosis

of Toxic Goiter" by "Dr. J. H. Cannon, of Charleston, S. C." should be credited to Dr. T. R. Littlejohn, of Sumter, S. C.

CHILD WELFARE COMMITTEES TO BE APPOINTED BY COUNTY SOCIETIES.

The Journal has received a letter signed by Dr. James A. Hayne, State Health Officer, and Dr. W. P. Cornell, Pediatricist of The State Board of Health, requesting all County Medical Societies to appoint committees on Child Welfare.

County Officers should send the names of such committees, at once, to Dr. James A. Hayne, Columbia, S. C.

This is an urgent matter. The infant mortality rate of South Carolina is the highest of any State in the Union.

ORIGINAL ARTICLES

AORTIC INSUFFICIENCY

Thesis by J. F. Woods, Member of the Graduating Class 1922 Medical College of the State of South Carolina, Charleston, S. C. Continued.

PHYSICAL EXAMINATION

An uncomplicated case of aortic regurgitation, and these are found but rarely in cases other than of luetic origin, gives a classical picture. The regurgitation in these cases result from a primary infection of the aortic arch, or aortic valves. In aortic regurgitation of syphilitic origin there is never an associated aortic stenosis as is sometimes found in regurgitation of rheumatic or arterio-sclerotic origin. Then aortic stenosis a more frequent associated condition is mitral regurgitation and stenosis when the aortic insufficiency is of rheumatic or arterio-sclerotic origin. In either of these two latter conditions the physical findings are more or less marked by those of the other lesions.

In case of uncomplicated aortic regurgitation inspection reveals more of value than in any other valvular disease. In extreme cases the patient's face or hand may blush visibly with each systole of the heart. The carotids pulsate violently, so much so that the whole head and trunk may be shaken. The temporals, the sub-clavians, the brachials, the radials, the femoral and anterior tibial and even the dorsalis pedis arteries may pulsate visibly, and the characteristic jerking quality of the pulse can be felt better than seen. The precordia bulges, the whole chest wall heaves, and there may be seen a pulsation in the suprasternal notch. This visible peripheral pulsation while very characteris-

tic of aortic regurgitation, is occasionally seen in cases of simple hypertrophy of the heart from hard muscular work, in arterio-sclerosis, in Graves disease and in the severe anemias. If the arteries are very much calcified, their pulsation may become much less marked. The apex impulse is seen to be diffuse and forcible, and is displaced downwards and to the left, especially the former, being located in the 6th, 7th, or 8th interspace and as far to the left of the sternum as the anterior axillary line. The displacement of the apex beat is the result of hypertrophy of the left ventricle and sagging downward of the enlarged aorta. Not infrequently there is a systolic retraction of the interspaces near the apex beat instead of a systolic impulse. This is due to negative pressure produced within the chest by the powerful contraction of an hypertrophied heart. Epigastric throbbing may be noticed and on gently rubbing a spot upon the forehead an alternate paling and blushing is seen. It may also be noticed in the finger-nails. It may also be seen if a glass slide is pressed against the mucous membrane of the lip so as to partially blanch it. This phenomena is known as Quincke's capillary pulse, after the observer who first noticed and described it. This phenomena is not often seen in conditions other than aortic regurgitation, but it has been noticed in perfectly healthy persons. A few other diseases in which it is occasionally seen are typhoid fever, phthisis, Graves disease, the anemias, and in some neurasthenic conditions.

On palpation the forcible heaving impulse is felt. When, however, dilatation predominates over hypertrophy, the impulse is weak and undulating. In the supra-clavicular notch a systolic thrill is often to

be felt; a diastolic thrill over the precordia is very rare. The character of the pulse is the important finding on palpation. The wave rises very suddenly and to an unusual height, then collapses completely and with great rapidity. This type of pulse is exaggerated if the arm is raised, so as to make the force of gravity aid in emptying the artery. This pulse is known as the "Corrigan pulse" or "water hammer" pulse after the gifted physician who first described it and compared it to the water hammer, a toy in which water, imprisoned in an exhausted tube, falls with every turn of the tube, from end to end. The explanation of the quality of the pulse in aortic regurgitation was formerly thought to be is suddenly and forcibly thrown into the aorta by the hypertrophied and dilated left ventricle, thus causing the sharp and sudden rise in the peripheral arteries, the arteries then emptying themselves in two directions at once, forward into the arteries and backward through the incompetent aortic valve; hence the sudden collapse in the pulse, which together with its sharp and sudden rise, are its important characteristics. Dr. Hugh A. Stewart disagrees with this explanation of the sudden collapse of the arteries and, in a series of experiments on dogs in which he produced artificial aortic regurgitation, has sought to prove that the pulse owes its abruptness and rapid fall not to regurgitation into the ventricle, but to an increased blood flow through the capillaries; and further, that this increased capillary flow is due, in a recent insufficiency, to reflex inhibition of the vasomotor center, probably induced by a stimulation of the depressor nerve effected by the mechanical action of the pressure transmitted from the aorta. He states that the pressure simultaneously increases the ventricular tone. It is obvious, he further concludes, that, if the main fall of pressure is due to an increased rate of capillary flow, any condition which retards it will cause the

disappearance of the collapse. This can readily be accomplished in the case of the radial artery by constricting the terminal vessels of the hand by applying an elastic tourniquet and using a chronosphygmograph. A decrease in capillary flow can be obtained also by venous constriction. If, while the arm is elevated, the upper arm is encircled in a sphygmomanometer cuff, and the pressure raised to a point below diastolic pressure, so as to obstruct the venous return only, the intensified sensation of the collapse of the pulse is no longer felt. This experiment while disproving the theory that the collapse is due to regurgitation, at the same time renders it evident that the elevation of the limb increases the sensation of the collapsing pulse, not by increasing back flow, but because it increases capillary flow by hastening the venous return. The diastolic blood pressure is maintained by peripheral resistance. When this resistance is lowered there is increased capillary flow. Not all cases of aortic insufficiency give the characteristic "collapsing pulse." In these cases the diastolic pressure is high. The arterial walls, within wide limits have been shown to obey Hooke's law, which means that the amount of extension is proportional to the force which produces it. It follows then, concludes Dr. Stewart, that the more the vessel is distended, the more rapid will be the rate of recoil, and it at once becomes evident how it is that the finger can always receive the sensation of a collapsing pulse when the diastolic pressure is low, while it is only in those cases in which the pulse pressure is excessive that it can with certainty be recorded by the sphygmograph. He states further that the absence of the collapsing pulse need not be due to a small pulse pressure, or, conversely, a large pulse pressure need not necessarily be accompanied by a collapsing pulse, but a collapsing pulse can only be seen in those

cases in which the diastolic blood pressure is low.

Dr. Clifford Allbutt believes a factor which cooperates in the production of the collapsing pulse is the great changes of pressure which occur between systole and diastole, and which have the effect of lengthening and widening the vessels, so that the walls adapt themselves but loosely to the blood which they contain. The arteries are then thrown into curves, which, on being straightened by each ventricular systole, cause the vessel to be thrown out of its bed with a visible and palpable jerk. This fact may contribute to the sensation, but it is not the whole cause, for the collapsing pulse can be distinctly seen before the vessels have had time to elongate, as is seen to follow the recent rupture of an aortic valve.

The collapsing pulse is one of the chief diagnostic signs of aortic regurgitation. While compensation lasts, the pulse is usually regular in force and rhythm. Irregularity is an especially grave sign, much more so than in any other valvular lesion. It is the sign of an associated myocarditis.

In the series of 63 cases of aortic regurgitation reviewed from the records of Roper Hospital only seven cases were mentioned as having the characteristic "Corrigan Pulse"; in the remaining 56 cases no mention was made of its absence or presence. In the same list of cases irregularity was found in $8\frac{1}{2}$ per cent.

Percussion is of little value in making a diagnosis of aortic regurgitation. It merely corroborates in the majority of instances what has already been found out by inspection and palpation as regards the size of the heart, and especially the left ventricle. The dullness is coextensive with the impulse, extending in some cases as far down as the 8th rib, and to the left to the anterior axillary line. Later, enlargement of the left auricle may cause dullness upward and to the left of the sternum. Enlargement of the right ventricle causes an

increase of dullness to the right. When the dilatation exceeds the hypertrophy, the area of dullness will be much extended transversely and slightly upward, the apex now being more rounded.

On auscultation a diastolic murmur is audible with its seat of greatest pronunciation at or a little below and to the left of the aortic area, and is transmitted down along the left edge of the sternum. It is usually soft, blowing in quality, and is prolonged, or "long drawn." It is produced by the reflux of blood into the ventricle.

In some cases it is transmitted to the axilla at the level of the fourth interspace but not by way of the apex. It may be heard at times in the vessels of the neck. The second sound may be well heard or be replaced by the murmur, or with a dilated aortic arch the second sound may have a ringing metallic or booming quality, and the diastolic murmur is well heard, or even loudest, over the manubrium. The first sound may be clear at the base; more commonly there is a short, soft, systolic murmur. In the cases resulting from arteriosclerosis this murmur is usually soft, but in those cases resulting from endocarditis the murmur is rough and harsh, due to the blood passing over roughened semilunar segments.

At the apex, or toward it, the diastolic murmur may be faintly heard, transmitted from the base. With full compensation the first sound is usually clear at the apex; with dilatation there is the rather loud systolic murmur of relative mitral insufficiency, which may disappear as the dilatation lessens.

Another not uncommon murmur is one heard over a limited area at the apex, is rumbling or rolling in character, and occurs in the middle or latter part of diastole, being generally regarded as presystolic in time. It is called the Flint murmur after the man who first called attention to its presence. The murmur is explained by the vibrations

of the mitral leaflets set up by the regurgitant blood flow from the aorta and the opposing flow from the left auricle. It is a condition essentially the same as in a moderate mitral stenosis. The murmur is very variable, disappearing and reappearing again without apparent cause. The sharp first sound and abrupt systolic shock, so common in true mitral stenosis, are rarely present, while the pulse is generally characteristic of aortic regurgitation.

Another auscultatory finding in many of the cases is a sharp, short, systolic sound, the so-called "pistol-shot sound"—due to a sudden filling and tautening of a relaxed artery, and heard over the large peripheral arteries, especially the femoral. This sound is merely an exaggeration of what may often be heard in health. Traube was the first to notice this arterial phenomena. Pressure with the stethoscope over the large peripheral arteries will sometimes bring out a diastolic murmur as well. This is known as Duroziez's sign and is seldom heard except in cases of aortic regurgitation.

In the series of Roper Hospital charts reviewed, the heart was stated to be enlarged in 30 cases; in 7 no enlargement was noted; and in 26 there was no mention as to size of heart. In 60 per cent of the cases there was a diastolic murmur at the aortic area; in 6½ per cent a diastolic murmur at the apex; in 11 per cent a double murmur at the aortic; in 7 per cent diastolic murmur at aortic and 3rd and 4th right interspaces; in 2 per cent diastolic at aortic and down the left side of sternum. In only 2 cases was the presence of the "pistol-shot" sound noted; in the remainder of the cases no mention was made of its absence. In 30 per cent of the cases no mention was made of a diastolic murmur. The arteries were found sclerosed in 41 per cent of the cases; in 57 per cent no mention was made as to the conditions of the arteries; one case had normal arteries.

The arteries:

It has been stated that aortic regurgitation often results from arterio-sclerosis, whether localized or generalized. In the latter case an examination of the arteries will reveal much of value. The pulsation of the carotids, the temporals, brachials and radials is very evident. With the ophthalmoscope the retinal arteries are seen to pulsate. Attention has been called to the capillary pulse, and the collapsing pulse.

Blood Pressure:

The Blood pressure readings in aortic regurgitation generally give a high systolic and a low diastolic pressure. Almost all cases show a high pulse pressure, but in some cases of aortic regurgitation the blood pressure reading may be within normal limits. There is generally an associated arterio-sclerosis that causes a high systolic blood pressure. Or, on the other hand, the arteriosclerosis may be caused from the increased strain on the arteries from the aortic regurgitation.

It was formerly held that in aortic regurgitation the reflux of blood into the left ventricle over distended and dilated it; and at each systole that this mechanical effect involves a great expenditure of cardiac energy, for it is accompanied by an augmentation of all the chemical processes which accompany contraction, as is evidenced by increased heat production. In aortic insufficiency, instead of a pressure equal only to the atmospheric pressure as in a normal ventricle, the intraventricular pressure tracings show that there is a pressure on the ventricular walls during diastole equal to the diastolic pressure in the aorta. The ventricle is thus locally stimulated to increased contraction by this pressure from the aorta through the incompetent valve, and the ventricle contracts similarly to muscle that is extended before it contracts. So long as the heart is able to supply the increased demands made on its energy there may be neither hypertrophy nor dilatation, and we thus see why every case of aortic

regurgitation is not accompanied by an enlargement of the left ventricle, as has been stated by Krehl. When, however, the cardiac muscle becomes inefficient it will give way to the stretching influences which bear on it during diastole, and the cavity of the ventricle will enlarge. This is followed by hypertrophy. But in so doing the increased work which the heart now accomplishes, as a consequence of greater systolic output, has the effect of raising the mean arterial pressure. There is thus established a condition in which there is greater transmission of pressure and consequently a greater waste of cardiac energy. The condition is a progressive one, for the greater the dilatation and hypertrophy, the greater the transmission of pressure and waste of cardiac energy.

It is thus evident how potent a factor is a low peripheral resistance in the preservation of the heart in aortic regurgitation. It not only lessens the tendency to regurgitation of blood, but it also reduces the influence of the increased tension on the ventricle as a stimulating agent. The conclusion then is that the most favorable factor to a patient suffering from aortic regurgitation is a low peripheral resistance or a low diastolic pressure.

In the series of cases reviewed from the records of Roper Hospital there were great variations in blood pressure readings on entrance in the different cases. The highest systolic pressure recorded was 240 mm Hg and the corresponding diastolic 108 mm Hg giving the highest pulse pressure recorded which was 132 m. m. of Hg. The lowest blood pressure was listed as 110 mm Hg systolic, and 60 mm Hg diastolic; and the lowest pulse pressure was 40. Many of the charts had no blood pressure reading on them. No definite conclusion can be drawn from these statistics unless we consider as valuable the average blood pressure reading which was 167/83 giving a

pulse pressure of 84. These are about the readings an average case gives.

(To be continued)

BREAST FEEDING

By *Wythe M. Rhett, M. D., Charleston,*
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It may be assumed that arguments as to the value of maternal nursing, (where such is possible) are no longer needed; however, a review of those factors which aid in making maternal nursing possible, where otherwise failure may result, is always of value. In presenting these factors, quotations will be made freely from the voluminous literature on the subject. Many of us glibly acquiesce, that maternal nursing is the thing above all others to be desired, but beyond telling the mother to nurse her baby every two, three, or four hours, at times according to the fad of the moment, do very little toward making that nursing the success it should be. Soranus of Ephesus, during the reign of Trojan, 110 to 130 A. D., laid down many of the rules in regard to proper technique of nursing which are in vogue today. He prescribed a rational diet and also special exercises for the nursing woman and warns against excesses of all kinds. He tells with great patience how to differentiate between the crying of hunger and that due to other conditions, such as colic, irritation of the skin, too much food, heat etc. Soranus accepted the use of wet nurses as more expedient;—in his day he no doubt considered the milk of a healthy slave better than that of a dissipated neurotic mother of the later Roman Empire. However, a short time after this, Gellius quoting the words of the philosopher Favorinus undoubtedly voiced a positive sentiment concerning the custom of wet nursing.

Read before the South Carolina Medical Association, Rock Hill, S. C. April 19, 1922.

ing and in advocacy of maternal nursing. His words are:

"And do you suppose that nature has given bosoms to women only to add to their beauty—more for the sake of adornment than for the purpose of nourishing children. Because some women believe this (and may this be far from you) they unnaturally endeavor to dry up and extinguish that sacred fountain of the body, the natural nourishment of man, with great hazard turning and corrupting the channel of the milk lest it should render the distinction of their beauty less marked."

"They do this with the same insensibility as those who endeavor by the use of quack medicines and other ways to destroy their conceptions, lest the same should injure their persons and their figures. Since the destruction of a human being in its first formation, while he is still in the hands of his artificer nature, receiving life itself, is deserving of public detestation and abhorrence, how much more so must it be to deprive a child of its proper, its accustomed and congenial nourishment when at last it is perfected and produced to the world?" His further arguments were directed towards *trying* to prove that the mother's own milk influenced the mind and development of the body of her child and that the child took the characteristics of the woman who nursed it.

The quotations above may be taken as a vigorous indictment of those mothers who refuse to nurse their babies. Fortunately through the vigorous campaign of education and enlightenment these mothers are now not numerous. Most educated, intelligent mothers of the present day are anxious to nurse and are sincerely disappointed when failure occurs. This education should be continued and directed along lines which would reach the poorer and particularly the less intelligent classes. Economic causes often lead to the early weaning of babies among this class, most often with disastrous

results—since artificial feeding is not apt to be of the best and enforced neglect adds another unfavorable influence. So that in these economic aid must be arranged, if necessary, to allow the continuation of nursing. But the desire to nurse, and the accomplishment of this function are entirely different, even under the best conditions of private practice, and Sedgwick in Minneapolis seems to have demonstrated that the fault lies with the physician, be he general practitioner, obstetrician, or pediatrician. Too many other mothers are advised or allowed to wean their babies with insufficient reasons therefor. The following table compares the series reported by Sedgwick as the result of his breast feeding campaign in Minneapolis with those reported by other observers, showing the percentage of women in each group nursing their babies and the length of time nursed, up to nine months, in some of the reports.

These figures would seem to show very clearly that we have been derelict in our duty toward the infant. Sedgwick was able, working with all classes, rich and poor, educated and ignorant, to about double the percentage of women who were able to nurse their babies six and nine months or more. His figures for mothers who were able to nurse their babies three months or more over 90 per cent and considerably above those of any other observer even under more ideal conditions of private practice, with presumably intelligent mothers. The infant mortality was reduced from 72.3 per 1000 births in 1917 to 65 per 1000 in 1919, which Sedgwick claims justly to be due to more maternal nursing.

Since numerous reports testify to the fact that the mortality of artificially fed babies during the first year is about six times as great as in nursing babies, and that the morbidity of the former is many times as great as the latter, not to mention later nutritional disturbances of the bottle fed baby to which the breast fed infant is immune,

	Failed to nurse at all	Nursed one week or longer	Nursed 2 Mos. or longer	Nursed 3 Mos. or longer	Nursed 4 Mos. or longer	Nursed 6 Mos. or longer	Nursed 9 Mos. or longer
Mitchell's Series, 2819, mothers at Children's Hospital, Philadelphia	20%	80%		55%		42%	34%
Manning's Series, 1000 cases, Pri- vate practice Seattle.	8.1%	91.9%		64%	54.3%	41%	26.8%
Brown's Series, 633 cases, private practice, Toronto.				76%		46.7%	30.4%
Koplik's Series, 1007 cases, pri- vate prac- tice, New York					40%		
Sedgwick's Series, wives of physicians.				80%			
Sedgwick's Series—all living births in Minneapolis over period of 9 mos. reported on.			96%	93%	89%	84%	72%

the conclusion may easily be deduced that many babies die each year from artificial feeding when with proper and intelligent supervision they may have been nursed at the breast successfully.

Reiss states that "it plainly rests with the

obstetrician to take up his rightful role as the mother's educator in breast feeding." If mothers were properly advised, during the prenatal period especially, he believes that fully 95 per cent of them could and would nurse their babies. No one is in a

more advantageous position to impress the mothers with the importance of breast feeding than is the obstetrician. In addition to usual instructions as to prenatal care he should assure the mother of her ability to nurse, and insist that it is the infant's inalienable right to be breast fed, and that every mother who fails to make every reasonable effort is derelict, and is robbing her child of its best opportunity for maximum growth and development. If these facts are indelibly impressed on the mother's mind, when the infant arrives, she feels that she must institute and maintain breast feeding at all hazards. Many competent observers (Jacobi, Sedgwick, Griffith, Schwartz and others) assure us that physiological failure of lactation is practically an unknown condition. It is reasonable then to assume that if the proper psychological attitude of the mother be attained, in nearly every case breast feeding can be successfully instituted. In addition to the psychological preparation, the obstetrician must so care for the mother during the prenatal period that she is physically ready to carry out this function.

Successful nursing depends in a large measure upon the care of the breasts and nipples, the position of the child while nursing etc., but chiefly the stimulation and continuation of milk supply depends upon complete and regular emptying of the breasts. This is accomplished ordinarily by the nursing of a vigorous baby. "When this natural stimulus is not obtained or when the demand on the breasts is insufficient for any reason, the supply of breast milk diminishes gradually until the breast does not support the baby. In these cases artificial aid is necessary". (Sedgwick) In most of these cases artificial stimulation may be supplied by milking the breasts. (Zlocisti, in 1913 advocated putting the father to the breast but this is open to objection on social and aesthetic grounds).

"A cross section of the breast shows that

the milk sinuses are largely just back of or in the area under the colored areola. So it is only necessary to apply the same principles as the milk maid applies. She grasps the teats only and does not massage or stroke the breasts over the glandular tissue. When this latter is done it often causes injury. Grasp the breast just back of the colored areola, press the forefinger and thumb together, thus closing off the sinuses. Then using a milking motion, push forward, then outward, thus emptying the ducts and sinuses to the nipple itself. This should be done gently and should not be painful. No trauma should be done to the nipple and the gland tissue of the breast itself is not injured."

This method is of great assistance in the large group of babies who are premature or weak from any cause, or who through illness are not able to be with the mother. The milk of a mother of a premature baby dries up, not because of the baby being born prematurely, but because the premature baby cannot make the proper demand upon the breast. Sedgwick states that in his experience "these mothers of premature babies furnish milk just as well as mothers of full term babies" and in case after case that "these mothers who are milking their breasts and not laying the baby on the breast on account of weakness of the baby, have just as good a milk supply, and are often able to furnish milk for their own baby and for another baby besides." This procedure takes a little more time, but most mothers, with a baby of this type certainly, are sympathetic and willing to aid and do not complain of the extra time involved.

This procedure is also of value when the trouble is with the breast or nipple itself and not with the baby. Sedgwick cites a case of a mother with inverted nipples who had failed to nurse two previous children—but with the above method, successfully carried out breast feeding for nine months. During the latter part of the time this infant

was able to nurse one breast fully and she expressed milk from the other for alternate feedings, but it was determined that she supplied more milk from the breast expressed than from the one nursed. This method may also be used in cases with sore nipples, fissures, etc. to let the nipple have the proper rest and at the same time the breast milk is not lost for want of stimulation. One should use every method known to encourage and instruct the mother in breast feeding, but it is stressed that it is the demand made on the breast, and expression when necessary, rather than the giving of large quantities of fluid, which is the important means of establishing and maintaining an adequate milk supply.

Having attempted to set forth the important facts in regard to establishment and maintenance of lactation, there remain certain groups of cases in which the mother's milk and the infant do not seem to be adapted for one reason or another. These babies constitute a large number of the total who are weaned for inadequate reasons. In no field of medicine can hard and fast rules be laid down to apply to all cases and we can only deal with the general principle involved. That physician will be the most successful who is the most painstaking in finding out the cause of the maladaptation in the individual case. When found, the remedy is often at hand.

One of the most evident and insistent groups of maladaptation is that large number of "colicky babies." Grulee shows that the large majority of these babies are suffering from excessive fermentation with the presence of irritant volatile fatty acids, due to a rich abundant breast milk which favors fermentation of this type. He found that the simple expedient of reducing the quantity of breast milk either by diminishing the length of the nursing or by increasing the interval between feedings or both, was sufficient in most cases of beginning colic to overcome the difficulty. In long standing

colic these simple measures did not avail. In some, the quantity of breast milk is not large but the proportionate fat content is high, a circumstance which tends to increase fermentation and reduce putrefaction. In this case Grulee advocates the use of measures to increase putrefaction and direct fermentation in the bowel along normal channels. So he gives casein before nursing for the purpose of increasing putrefaction and gives cultures of lactic acid bacillus to stimulate fermentation of the non-irritating kind. He advises adding either powdered casein, one gm., before each nursing, or giving albumen or protein milk formula after nursing, where milk supply is scanty and insufficient, with high fat. Where the supply is sufficient and the above procedure does not correct, he advises that the breasts should be expressed at regular intervals, the breast milk should be skimmed and the skimmed breast milk fed with the casein as above.

I think we are all agreed that anodynes directed against the pain and colic in these cases, while possibly permissible in severe cases for immediate relief, do not prevent its recurrence. The underlying cause of the colic is still present and the colic is manifest again as soon as the "Soothing Syrup" is withdrawn.

The management outlined above undoubtedly relieves the majority of infants with colic. But there are surely other causes of colic than from too much breast milk or too rich breast milk. Thus many infants with neurotic nervous mothers only have colic at times when the mother's "nerves fly off at a tangent," and it cannot always be demonstrated that the change in the milk at this time is one of fat proportions. That some change does occur in the milk of these mothers under undue nervous strain, excitement or emotion, is attested by numerous observers of its dire effects on the infant in many cases. The management of these cases at times requires the utmost patience and tact, but in many a satisfactory regime

may be instituted, and often the knowledge of the factor influencing the digestibility of her milk will enable the mother to apply the necessary restraint. Still other factors may enter into the causation of colic in infants as demonstrated recently by Shannon. Rotch noted in 1901 that "certain vegetables and sometimes fish will in individual cases affect the milk and cause discomfort in the baby." Griffith states that in exceptional cases where the mother may have idiosyncrasies to certain foods, they may affect the breast milk so as to cause disturbances to the infant. A number of investigators, especially Schloss have held that protein sensitization in the infant may be manifested by colic, diarrhoea, vomiting etc. on ingestion of the offending protein. Shannon recently demonstrated by anaphylactic experiments on guinea-pigs that egg protein may pass into the mother's milk unchanged and may be responsible for symptoms in the infant. O'Keefe found that nursing infants gave positive skin reactions to proteins they had never eaten and in some recovery from certain symptoms manifested were prompt on removal of these proteins from the mother's diet. Shannon followed his investigation by clinical tests—(sensitizations)—on infants with persistent colic not responding to the ordinary treatment outlined above, and demonstrated an allergic reaction in these infants. Furthermore he was able to produce further clinical proof by prompt cures of the colic when the offending protein was withdrawn from the mother's dietary.

These investigations require further substantiation by other observers, but food allergy certainly offers an inviting explanation of certain types of persistent colic, not thus far explained on any other basis. They do not constitute a very large number, but recognition of those that occur may remove the necessity for a too early weaning.

Another large group of babies requiring assistance are those which fail to gain on the

mother's milk, though emptying the breast regularly and showing no symptoms of indigestion. By the simple process of weighing the baby before and after each nursing for a period of twenty four hours the total amount of milk obtained from the mother may be ascertained. In these babies it is most often found that the total quantity is insufficient for the baby's need for heat, energy and growth. The necessary additional food may be added after nursing. The baby should be nursed regularly for fifteen to twenty minutes, enough to empty the breast each time, and a complemental bottle then given, sufficient in amount and strength to make up the caloric needs of the individual infant. It not infrequently occurs that a mother with a scant supply at first will later supply sufficient with the persistent stimulation of nursing, and the additional bottle feeding may then be dropped. Even when this does not occur the mother frequently is able to supply a large portion of the food required, for four to six months or longer and thus carry her baby through at least the first few critical months with the advantages derived from breast milk. The advantage of complemental rather than supplemental feeding (the substitution of bottles in place of nursings) in these cases is obvious—since it is the stimulation of regular, frequent and complete emptying of the breast which promotes an increase in supply to meet the demand, while any falling off in demand such as occurs in the latter method is followed by a progressive, rapid failure of the already scanty supply. This latter method is described by Southworth as "the most scientific way of drying up the breast milk and precipitating unnecessary weaning."

The regime of the nursing mother is of some importance. The question of food is a much abused subject, and the consensus of opinion seems to be that it is only necessary that she take a varied nutritious diet, including meats, vegetables, cereals,

fruits, milk etc. She may follow the dictates of her appetite and taste so long as the general principles of nutrition are followed as well. To enable her to digest and have the appetite for additional food it is necessary that she take a certain amount of exercise and recreation. She should avoid undue excitement, emotion or excesses of any type—so that for the nursing period, certainly in cases where these factors are causative of disturbance in lactation, the mother should be informed of this factor and the causes removed as far as possible. These causes are not infrequently too much social activity. Worry, anxiety, mental and physical fatigue are most potent factors in disturbance both of quality and quantity of milk supply.

The question of weaning a baby should be considered from all angles, the health and welfare of the mother and of the child being of first consideration. In many the question of economics is a factor also which cannot be disregarded.

The absolute indications for weaning are:

1. Open tuberculosis, because of the danger of infection of the child and because of the continued drain on the vitality of the mother.

2. Abscess of the breast, nursing may be continued on the non-infected breast.

3. Chronic, wasting or malignant disease or profound weakness on the part of the mother from any cause.

4. Pregnancy, when established the infant should be gradually weaned. The immediate removal is not indicated but the mother can hardly be expected to continue to nourish a child at the breast with another in utero.

5. Serious nervous disorders, weaning is usually indicated.

6. Onset of rickets and anaemia in a nursing child, the nursing baby should be watched for the early signs of rickets which not infrequently are noted after the fifth to

sixth month. The individual mother's milk, deficient in certain elements, may produce ricket, in the infant just as easily as artificial formulas with the same fault. These babies should be gradually weaned to a proper milk formula with special treatment directed toward correction of the rickets.

Doubtful Indications for Weaning:

1. Acute infectious diseases, in a vast majority of these the mother's breast may be expressed and lactation kept up until such time as the baby may be returned to nursing.

The return to nursing in these cases would depend upon the severity and length of illness and the condition of the mother's health during convalescence.

2. Menstruation, rarely, if ever is a proper reason for weaning the baby. Menstruation occurs in a large percentage of women before the end of lactation, and many menstruate regularly throughout lactation. In a few the baby has digestive symptoms for a few days but is entirely free from disturbance for the rest of the month; in most of them there is no disturbance in the baby.

3. Syphilis, when it is evident in either mother or child both may be considered infected unless it is contracted after the birth of the child. In the latter case if put under active treatment and no open lesions are present there is very little danger of transmission. Where both mother and child have syphilis, there is no indication for weaning.

4. Eclampsia, the mother's milk should be expressed and lactation retained until the mother is free from toxemia when nursing may be instituted.

5. Extreme nervousness of the mother, without serious nervous disease, may disqualify her for maternal nursing. With proper management and a knowledge of the factor disturbing her milk supply, many of these mothers may be carried through the nursing with success.

DISCUSSION DR. RHETT'S PAPER, "BREAST FEEDING."

Dr. R. M. Pollitzer, Charleston:

This paper on breast feeding is a very interesting and comprehensive one, and it seems to me most important. Nearly all of us tend to children, and you must all realize that the great bulk of the babies seen in the first year of life would not have been seen by you had they been breast-fed. Infant mortality is high; in some places very high. It has been estimated that at least half of the deaths of infants are preventable, and I believe that they could be prevented if children were fed upon the breast. Of one hundred babies fed on the breast, seven will die before the first year is out. Of another hundred not breast-fed, thirty will die. There is nothing that can be done by any man, however brilliant he is, that will compare with nature's method. The artificial method has produced good results, but even so it is not as good as the natural method. The question is, can all women nurse their babies, as other mammals do? If they should, can they? Barring a few exceptions, such as have been pointed out, they can, and if they can and they should, why don't they? One of the commonest reasons is that the milk may be late in coming. The milk in all women does not spring at the same time, and the mothers become discouraged. Another reason is that there may be only a slight gain in the baby's weight, but if the baby does not gain for a week or two, that is no reason for taking it off the breast. The baby does not gain every week, but there is an average gain.

Colic, I suppose, causes the weaning of most babies. It is a fact that many babies do have colic, but we can treat it more or less successfully. Some cases can be cured or at least helped, and some can not be cured. But that is no reason for weaning a baby. Some babies are weak and premature, and do not get enough milk, and they should be helped and given enough food. Selfishness of the mothers is a factor in weaning. After the baby is several months old they say that they think they have nursed it long enough and ask for a formula. But the doctor should explain the matter and advise the mother that she is taking the responsibility for the

child's life. Sore nipples are often the cause for taking the child off the breast. Insufficient attention is given to the mother's breast.

It should be explained that there is no magic in proprietary foods, and that the baby on the breast is far better off than the one fed on artificial food.

Discussion of Dr. Rhett's paper, "Breast Feeding."

Dr. Lindsay Peters, Columbia:

Notwithstanding the fact that all of us are impressed with the importance of having infants take the breast, the matter is so important that I always like to hear emphasis laid upon it. I think, though, that pediatricians are inclined to make it appear that when a woman does not nurse her baby the doctor is more or less to be censured.

I have seen very few mothers who could not nurse their babies, but it seems to me that in the past few years I have found a larger number, and this is co-incident with the practice I have started in recent years of having the infants nurse every four hours, this owing to the fact that some of my pediatrician friends have insisted upon the advantage of this long interval between nursing. I have wondered if there is any connection between the long interval and the number of mothers who have had the breast milk fail under this plan. The mothers whose milk failed had the breasts emptied and stripped and all the measures carried out which the Doctor recommended, but the milk failed. I am inclined to revert to the old plan of three hour intervals, instead of four.

3—Discussion of Dr. Rhett's paper, "Breast Feeding."

Dr. D. L. Smith, Spartanburg:

The premature baby, I think, gives us more concern in nursing. My plan has been to get the breast emptied and to assist these babies, especially in the first month, for then we find a great difficulty in getting the breasts emptied, the milk dries up, and the baby starves. The best method, I think, is to get a young puppy a few days old and put that to the breast. I find that the best breast pump. Most of those on the market are not very good, and, in fact, I have never seen a successful one. The next best method is emptying the breast with the hand. If you can get a wet nurse and keep the baby on the wet nurse for a few days, while you are taking care of the mother, that is best for the baby.

I have seen babies weaned a month whom I have successfully put back on the breast by putting the baby to nurse at regular intervals, giving the baby complementary food to assist it. The reason why we see so many babies on the bottle is because of the supplementary feedings. To give alternate feedings on the bottle is a sure way to dry up the milk. The only proper way is to complement—nurse the baby and then give the bottle.

The four hour method, I think, is all right if it suits the baby, and the three hour method is all right if it suits the baby. I do not think that the two and one-half hour interval is successful with the majority of babies. The three hour interval from birth suits the most, but the four hour interval suits a good many.

4—Discussion of Dr. Rhett's paper, "Breast Feeding."

Dr. John La Bruce Ward, Ashville, N. C.

Dr. Rhett asks if it is ever necessary to put a baby on the bottle. It very rarely is.

I have no apologies to make for the four hour feedings. This method was popularized in this country by Dr. Grulee, and most of the pediatricians are following his lead. In the large majority of instances the normal child will thrive better on the four hour interval. A small number will thrive on the three hour interval, but I do not believe that any child will thrive on more frequent feedings than three hours. As for the four hour interval's being responsible for the milk's drying up, it is a possibility, but only a possibility. On the four hour interval the breast is emptied six times in the twenty-four hours, and even if the baby is nursed oftener it should not get more than seven feedings in twenty-four hours. Personally, I do not know that I have ever seen the milk dry up with the four hour interval, and the baby does not have so much colic and the mother is in better health.

One point not brought out is that the physician too often stresses the importance of milk analysis. As a general proposition, that is an absolute farce. One analysis of breast milk means nothing at all—or two or three or five. when we recall that the percentage of ingredients in the milk varies from hour to hour and from day to day, and varies as the sample is taken at the beginning or end of the feeding. But very often a physician will have the baby weaned because the sugar content or the fat content is too high or too low. I think it is all foolishness, so far as weaning

the child is concerned. Let us realize that the trouble is not with the milk at all, but with the child, and as soon as the child adapts itself to its mother's milk, which will probably be in four to six weeks, it will thrive.

5—Discussion of Dr. Rhett's paper, "Breast Feeding."

Dr. Ward, continued:

Make the mother believe that she will be able to nurse her baby, and you will find that the milk supply increases. Let her live a normal life, having the same diet as her husband, provided that she can digest it, and the milk will increase.

The baby should be weaned at the ninth or tenth month, as otherwise you are likely to have anemia from lack of iron. The baby should not be allowed to nurse too long.

6—Discussion of Dr. Rhett's paper, "Breast Feeding."

Dr. Wm. P. Cornell, Columbia:

Over ninety-five per cent of the cases of Diarrhea that will occur this summer among infants will be amongst the artificially fed babies. For this reason, when this paper is published, study it. It deserves serious study.

One of the chief duties of the pediatrician is the education and reassurance of the mother in raising her child. The placid mother makes the best nurser, just as the placid cow makes the best milker.

Unless the breast is stripped and made to do its work, the milk will soon dry up. For that reason supplementary feedings—giving the bottle in place of the breast—are wrong. The baby should be nursed regularly, at the proper intervals, and if there is not enough breast milk, complement with sufficient food to give the baby the required number of ounces for its weight, the extra amount needed can be most successfully determined by weighing the baby before and after nursing.

In prolonged nursing cases the chief thing we try to explain to mothers is the lack of iron in the breast milk. This explains why premature babies are so hard to raise, for, it is during the last three months of intrauterine life that the baby stores up enough iron to last nine or ten months. If the baby goes on nursing into the second year, you have the explanation of the pallor which comes from prolonged nursing. It is due to the lack of iron.

Another important reason for breast feeding is that the baby must have protein, and it gets the protein from the mother's milk.

Most babies, when weaned, are put on Horlick's food, or condensed milk, in which we find practically no protein. This explains why these babies artificially fed on carbohydrate diet have no resistance, and collapse when the hot weather comes. If we would start right now and see that they get an ounce of cow's milk to each pound of weight per day, we would build up their resistance so that they could stand the hot summer, and the morbidity rate and the mortality rate would be markedly lowered.

BACKACHE, AS RELATED TO GYNAECOLOGICAL AND ORTHOPAEDIC CONDITIONS

By Dr. Wm. A. Boyd and Dr. Robt. E. Seibels, Columbia, S. C.

The symptom backache, in the female, is not only a discomforting, and often disabling condition to the patient, but presents a troublesome and difficult problem to both the Gynaecologist and Orthopaedist in their efforts to locate, the causative factor.

It demands, a painstaking effort on the part of both Specialists, in associations frequently with the Internist and Roentgenologist, if errors of surgical judgment are to be avoided, and the patient's relief of the distressing symptom obtained.

From the Orthopaedist's standpoint, there are many causes for this symptom, acting alone, or (sometimes in association with a definite gynaecological condition); such as flat, weak or pronated feet. Anterior metatarsalgia, sacro iliac strain, irregularities in the length of the legs (either congenital or acquired), with tilting of the pelvis, arthritis of the Lumbo-dorsal region, Sacrolization of the fifth lumbar vertebra, elongation of the transverse processes of the lower lumbar vertebrae, weakness or paresis of the back muscles of one side, either from an old Infantile Paralysis or from habitual

bad posture, Traumatism, Coccygodynia, Spinal Caries, etc.

I would impress upon you, that your examination of an individual, for this troublesome condition cannot be done in a haphazard or careless fashion, nor can it be carried out with your patient partly dressed, or beneath the sheets, if you are intent upon finding the cause. The examiner cannot determine, for instance, the degree of tilting of the pelvis, and the amount of correction necessary, unless the nude dorsal surface of the body, with the patient standing is examined, as stressed by Lewin in the Journal of the A. M. A.; the degree of shortening of limbs by measurement unless the bony landmarks are uncovered, or evidences of recent or past traumatism.

The patient's history should first be obtained, the past illnesses recorded, the urine and blood examined, X-Ray plates of the back made, and then a definite investigation of the backache, when it first appeared, under what conditions, was it associated with traumatism, is it constant and persistent, is it relieved by changes in posture, and if so, what position relieves it.

With the above information, the examiner is then in possession of definite facts to aid him in interpreting his physical findings. The physical examination should be in regular order, first, a general inspection of the nude body, with the patient standing, noting all evidences of deformity, curvatures of the spine, abrasions, contusions or skin eruptions, limitation or forward, backward or lateral bending; palpation, revealing the presence or absence of tenderness of the muscles or bones, fluctuation, which to be reliable must be verticle, hyperesthesia of the skin (suggestion of referred visceral pain); tapping of each spinous process of the vertebrae for pain or tenderness; sudden jarring of the body on the heels, with the legs held rigid from the hips for pain; note the line of weight bearing by use of a plumb line, which in the normal, runs from the

center of the patella through the center of the ankle joint, to the interval between the 2nd and 3rd toes.

Then place your patient in the dorsal position, on a flat, level table and note any limitation, from the normal, in the various joint movements; presence or absence of Goldthwait's sign; that is, limitation of motion in straight leg raising, and pain, if the motion is attempted beyond this limit, which is referred either directly to the Sacro-iliac region affected or to the legs; this pain will frequently be provoked not only by the straight leg raising on the affected side but also on the unaffected side, because with the leg straight, the tense hamstring muscles attached to the Ischium, will move the Ileum, and the Sacrum will move with the Ileum, resulting in strain of the opposite Sacro-iliac joint. The legs should be measured, from the Anterior Superior Spines (with the pelvis fixed, so that these two joints are on the same line) to the Internal Malleoli for actual shortening, and from the Supra-sternal notch or umbilicus to the Internal Malleoli for apparent shortening; finally determine the activity of the various groups of leg muscles. After such a procedure, with the findings charted, the examiner, should be able to determine the exact causative factor,—if Orthopaedic—and give to his patient advice worth while.

From the Gynaecological aspect, backache in women may be due to anything from domestic infelicity to multiple uterine fibroids. The lower lumbar region, since time immemorial has been the place of heightened aesthesia and the average woman has a pain in the back for almost any reason. This must be borne in mind whenever we are consulted for this symptom in order to avoid embarrassment and disappointments and in order that we may furnish prompt relief for this distressing condition. If any of you will remember the woe you had with the flue backache and think how upset you would have been, had you been

told that it was due to a chronic appendix, have undergone the operation, and have gotten up to resume your work only to find the same old ache in the back—would you not have said “all men are liars”? and that is what our patients face when we suspend a retroflexed uterus for a backache caused by infected teeth, flat foot, or a brute for a husband.

We cannot hope to name for you all the possible Gynaecological causes of backache—we do want to attract your attention to the fact that it is a distressing symptom, but that it is usually remediable, often without operation, and that it is not to be dismissed with the casual remark that “all women have it.”

As Gellhom remarks in his paper, the trend of gynaecology is not toward the development of operative technique but rather to reaching a sounder basis for our work, which means simply more accurate diagnosis, and the making use of the non-surgical means of treatment.

The history of the case is of positive and negative significance. Positive in the light of possible causative factors, negative when in response to inquiry, a volume of worries and anxieties is found out, indicative of no mechanical derangement but of a mental state. And the physical examination. This is not ended by palpation of the pelvic organs under a sheet, it is not even begun here. Teeth, tonsils, thyroid, abdominal musculature, all must be included. The build and conformation indicative of the endocrine status as well as of possible orthopaedic disease, must be considered.

The examination of the pelvic organs should include inspection as well as palpation. And palpation not only in the dorsal portion, but in the knee-chest posture, to determine the mobility of the uterus, and also in the standing position to diagnose the prolapsus and the possible presence of varicose veins of the broad ligaments. This latter condition is only to be diagnosed by

examination in the standing and dorsal position, when the patient stands a soft boggy mass may be palpated in one or both fornices and it disappears when she lies down.

Bullard, has presented the matter statistically in a most illuminating follow up of 721 cases which had been operated for definite pelvic pathology associated with the symptom of backache. Only anatomically satisfactory results are tabulated; that is, the patient examined after operation the condition found anatomically relieved, and the symptomatic result recorded, as follows.

I. Retroversion uncomplicated gynaecologically, 129 cases; backache cured 103, unrelieved 26 (20 per cent)

II. Retroversion with adnexal inflammation, 68 cases; backache cured 59, unrelieved 9. (13 per cent).

III. Adnexal inflammation only, 19 cases; backache cured 17, unrelieved 2 (10 per cent).

IV. Uterine prolapse (of various degrees) 84 cases; backache cured 75 cases, relieved 9 (10 per cent).

V. Plastic operation only, 46 cases, cervix operations 8 cases; relieved 8. Cystocele and rectocele, rectocele only, and repair of cervix and perineum, 38 cases; backache cured 26, unrelieved 12.

VI. Uncomplicated retroversion with laceration of cervix and perineum, 23 cases, backache cured in all.

VII. Uncomplicated ovarian cyst, 9 cases; backache relieved in 7, unrelieved 2.

VIII. Fibromyomata uteri, 38 cases; cured 33, unrelieved 5. (14 per cent).

IX. Complex condition, 307 cases; backache cured 260, unrelieved 47. (15 per cent). Average unrelieved 15 per cent.

Cases in which there were good gynaecological reasons for expecting backache but none found.

I. Adherent retroversion with inflamed adnexa	47 cases
II. Uncomplicated movable retroversion	20 cases
III. Prolapse of various degrees	20 cases
IV. Procidentia	9 cases
V. Complex conditions	29 cases
Total	125 cases 16%

We have boldly used Bullard's figures as they represent the largest number of cases examined and checked up. Our own series, while small, bears out his percentages in the main.

We feel, therefore, that no gynaecological operation nor orthopaedic measure should be undertaken for the cure of backache without first eliminating other possible causes. And where backache was complained of and anatomical cure derived but the pain persists, careful search must be made for another etiological factor.

This subject was forcibly brought to our attention in June 1921 when we were consulted by a woman of 35, who had had two children, who had constant backache, increased at her periods so that she was in bed two days a month. She sent to us for operation. The uterus was retroverted, heavy and not readily movable. In the course of a general examination, 2nd degree flat foot with pronation was observed. Dr. Boyd fitted her to proper arch supports, and the backache disappeared. The retroversion was corrected by exercise and the cervix cleared of infection, so that she is entirely comfortable and no operation is indicated.

CONCLUSIONS

We feel therefore, that no case should be considered finally diagnosed as either gynecologic or orthopaedic backache until other possible causes have been carefully investigated, and close cooperation between these two specialties is certainly desirable.

1. Lewin, Philips, Journal A. M. A., Vol. 78, No. 11, March 18, 1922.
2. Gellhom, Am. J. Obst. and Gynec. 1922, 111, No. 3.
3. Kelsalls, Am. Jour. Surgery, 1921, XXX, 8.
4. Emge, Surg. Gynecology & Obstetrics 1921, XXXII, 133.
5. Bullard, E. A. N. Y. Med. Jour. 1921, CX111, 142.

1—Discussion of paper by Drs. Boyd and Seibels, "Backache as Related to Gynecological and Orthopedic Conditions."

Dr. R. T. Ferguson, Charlotte, N. C.

In my service as orthopedist to Base Hospital in France I had cases of backache referred to me every day, and in some three hundred such cases which were X-Rayed not one showed any deviation or trouble whatever in the sacro-iliac joint, where the pain was.

I have not always been able to locate the cause of backache. A misplaced womb, cys-

tic ovary, pus tubes, perineal tears, tears in the cervix, all cause backache. Still, a great many of these cases, after being operated upon and the trouble relieved, still have backache. It is certainly a very important symptom and one that we should all study, because it is one that nearly all women complain of. Backache in men, until my service in the Army, was something I knew very little about. In the Army it got very popular, and some men could not drill at all because of backache.

2—Discussion of paper by Drs. Boyd and Seibels, "Backache as Related to Gynecological Orthopedic Conditions."

Dr. Frank Lander, Williamston:

To the general practitioner and to the country doctor this paper is a wonderful joy, and I am rising simply to thank Dr. Boyd and Dr. Seibels for their beautiful and masterly presentation of the subject so important to us all. The old and classic definition of a woman as being "a constipated biped with the whites and backache" comes to us every day, and this paper is a joy to the country doctor.

INTERNAL MEDICINE

GEORGE R. WILKINSON, M. D., Greenville, S. C.

Interesting points in the alimentary tract of tuberculous patients.

The proper functioning of the alimentary tract is the sine qua non in the well being of those afflicted with phthisis. One too often sees patients whose pulmonary trouble appears to be fairly well in hand beginning to go down hill. The complaints are quite varied, but are usually associated with alimentation. The loss of appetite, belching, bloating, pain in the lower part of the abdomen, crampy pains coming on at irregular intervals, constipation alternating with diarrhoea, prostration immediately after defecation and stools with a foul and penetrating odor make up a picture that one often sees. When any of these symptoms appear one should palpate the abdomen carefully, especially over the region of the cecum, where tenderness and muscular rigidity are commonly discovered. With the aid of the X-ray, filling defects are seen with great regularity. The rigidity and spasticity of the involved part keeping the opaque meal almost entirely out of the picture. It is of the utmost importance to discover the presence of early cecal tuberculosis since the complication can be so nicely dealt with by a skilled abdominal surgeon.

Quite frequently, too, one sees, a case

where the patient complains of fullness for several hours after eating, without the dire symptoms mentioned above. This type of discomfort is often due to the inability of the stomach to empty itself fully before the ingestion of the next meal. By using smaller meals this complaint is often remedied. Occasionally one has to resort to the use of small doses of atropin in the form of the Tincture of belladonna especially where the trouble is associated with spastic constipation.

In well established cases of tuberculous colitis chronic and persistent diarrhoea is a symptom which adds greatly to the discomfort of the patient and attendant. It often requiring the entire time of an attendant to serve a single patient. Sooner or later one is usually forced to resort to opiates, however, before beginning this type of medication the writer has found the use of bananas to be of great benefit. Not only do the bananas serve as a check to the frequent passages but also as an extremely good food. Six bananas per day to begin with are not too many and the number may often be increased to twelve. This type of feeding is also of considerable value in the diarrhoeas associated with Pellagra and Hyperthyroidism.

OBSTETRICS AND GYNECOLOGY

R. E. SEIBELS, M. D., Columbia, S. C.

The use of "Roentenography in Obstetrics" (Horner, Surg. Gynec. & Obst. 1922 XXXV, 67) might properly be classed as a subject for discussion by those specialists who make and interpret plates. Such an attitude to this diagnostic aid does not make for progress. In the assistance of a competent radiologist, the obstetrician has an ally in diagnosis and prognosis whose appearance, however recent, has not deterred him from making some most valuable contributions in this field. As in bone plates, for example, it is foolish to ask for complete diagnosis, outline of treatment and prognosis from the radiologists, it is only by a frank and full consultation between the orthopedist and the radiologist, that a reasonable programme may be mapped out.

So in Obstetrics it may be that the early interpretations of pelvic diameters are subject to error but these errors will likely be reduced to a minimum and a working formula be made out if more pelvic plates are made and the results checked up afterwards. The expense is an important item to the patient and we are not inclined to ask our private cases to add this burden to the other expenditures necessary to have a baby, without a clearer knowledge of the value

of the interpretation. Where the expense is otherwise borne than by the patient, it seems entirely reasonable to further the knowledge in this field. The measurements of the fetal head as well as those of the pelvis may be worked out this way. Even if so far these measurements have not been over accurate the error has been no greater than that of the Obstetrician and it is reasonably suggested that the hope for accuracy in fetal and pelvic measurements lies in the hands of the radiologist.

Certain diagnosis and prognosis can reasonably be expected. The diagnosis of intrauterine death is apparently made sure by Spaulding's sign (Surg. Gynec. & Obst. 1922 XXXIV, 754). If death of the fetus is suspected it's sure knowledge may change our procedure entirely in a deformed pelvis. The diagnosis of intrauterine pregnancy cannot be made with certainty before about four months,—after that it is easy. Bypneumoperitoneum, ectopic pregnancy has been diagnosed at six weeks. Birth injury to the bony parts of the fetus can often be diagnosed only by the X-ray.

The use of the X-ray in the diagnosis of septic conditions of the teeth and sinuses need not be dilated upon.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

Effect of Tonsillectomy on the General Health in 5000 Children. By Dr. A. D. Kaiser, Rochester, N. Y. Journal A. M. A. June 17th, Page 1869.

Fifty thousand school children were examined and only those showing obviously diseased tonsils and obstructive adenoids were recommended for operation. Ten thousand were operated upon, and of these, five thousand were re-examined at the end of one year. They were divided into four groups as to the causes for operation as follows:

1. Large tonsils, with clinical signs of infection---No. 3633, or 73%
2. Large tonsils, no clinical signs of infection -----No. 175, or 3.5%
3. Normal size tonsils, with signs of infection -----No. 1142, or 22.5%
4. Normal size tonsils, no signs of infection-----No. 50, or 1%

Symptoms evidenced: before operation.		1	year	after	operation:
Mouth Breather	3587, 72%	463	or	9%	
Frequent sore throat	2870, 57%	272	or	5%	
Frequent colds	2309, 46%	400	or	8%	
Enlarged neck glands	2182, 43%	2100	or	42%	
Ear trouble	1131, 22%	238	or	4%	
Frequent fever attacks	428, 9%	51	or	1%	
Joint, or growing pains	200, 4%	37	or	7%	

"It is very doubtful whether tonsillectomy lessens the incidence of the common infectious diseases."

There were 39 per cent malnourished children at time of operation as shown by average height-weight tables. One year after only 29 per cent were found malnourished. Many children gained from 10 to 20 pounds during the year.

From the statements of the Parents 84 per cent of the 5000 children were definite-

ly better, while 15 per cent showed no change, and 1 per cent were reported worse.

Relief from mechanical obstructive symptoms was obtained in 95 per cent of cases.

Subjective symptoms were appreciably lessened except for the high incidence of cervical adenitis.

There was a marked improvement in the general nutrition, and, according to the parent's statements, there was a lessened morbidity rate.

School records show a decided mental improvement in many of these children, and reports from the Dental dispensary demonstrate a lessened incidence of malocclusion of teeth.

There was no immediate operative mortality among the 10000 cases.

Post operative complications did occur though they were not frequent.

The operations were done during the win-

ter months and coincident respiratory infection caused febrile reactions frequently.

Five cases developed lung abscess, four of which have recovered, the fifth is still in hospital.

Otitis Media, catarrhal and purulent, are not uncommon, but there was no mastoid involvement. One case of purulent meningitis which recovered.

Eight children developed pneumonia. Diphtheria develop in seven children after their return home.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

Kretschmer Herman L.: Traumatic Kidney: Discussed Particularly from the Standpoint of the Industrial Physician and Surgeon. Presentation of Cases Illustrating the Various Types of Traumatic Kidney. The Surgical Clinics of North America, Vol. 2, No. 3, June 1922.

Dr. Kretschmer has had under observation in recent years a series of cases representing a type of kidney injury quite different from that usually seen. The usual type of traumatic kidney is that in which considerable damage has been produced, such as the result of severe fractures, gun shot wounds etc. The type that he discusses represents such injuries that may be received during the pursuit of some hazardous occupation and necessitates the proving or disproving of a liability on the part of the corporation which has employed the patient.

With a history of injury, the presence of blood in the urine is taken as a cardinal symptom of trauma to the kidney. He states, "A history of injury, no matter how slight, and the presence of blood in the urine would seem to be prima facie evidence of direct kidney damage, and if this is the result of a trauma incurred during the occupation of the patient, it would upon this rather superficial data place the liability for damage directly upon the employers or employing corporation."

"There are two fundamentals to be worked out in each case: 1. Was there blood in the urine following injury? 2. Was the hematuria due to injury or are there other pathological lesions present that may account for the hematuria?"

Sometimes there is only the patient's or the physician's word that a hematuria was present. Such a statement cannot be disputed.

With a history of trauma, one must consider the possibility of a pathologic condition existing to injury and that the condition was aggravated by the trauma. One must also consider that merely on account of the trauma, the patient's attention was called to a diseased condition which had been previously overlooked.

He cites a case showing that the hematuria was not of renal origin, although there was a history of a kidney injury. This case is as follows: "Male, aged thirty, referred by Dr. L. P. Kuhn. While engaged in the performance of his usual occupation patient received a severe injury to the back. Following the injury patient immediately noticed blood in the urine, and it was stated that the urine was port wine colored. A physician was called who made a diagnosis of hematuria and fracture of the last rib. This case came before the Industrial Board, and the physician stated that the hematuria was renal in origin and that the kidney was injured by penetration of the end of the fractured rib, which injury the patient sustained in carrying out his usual occupation. So convincing was his testimony that the patient was awarded a verdict of \$2800.00 as well as his hospital bill. I was asked to see the patient. Cystoscopic examination revealed the presence of a papillary tumor near the right ureteral orifice. Comment is hardly necessary."

He next shows in which disease of the kidney existed prior to the injury, but symptoms were not noticed until after the injury.

The following is an example of such a case: "L. R., aged twenty-seven, electrician, was referred by Dr. J. B. Moore, Benton, Ill. One month before coming under observation the patient strained his back while lifting an armature. At that time he noticed a sharp pain in the back. Blood was first noticed in the urine two days later and persisted up to time of entrance to hospital. No blood was ever noticed prior to injury. Examinations of abdomen was negative. No tumors or masses. X-rays were negative with the exception of a small wheat-sized dense shadow in region of left kidney. Cystoscopy showed a few areas of ulceration in bladder wall. Ureteral orifices were normal and ureters catheterized without difficulty. Urine from the left side was turbid; from right side, clear. Cell count and cultures were as follows: Bladder, 3,880 cells, sterile cultures; right kidney 6080 cells, bacillus coli culture positive; left kidney 380 cells sterile cultures.

A second cystoscopic examination was made one month later. There was no flow of urine from right side; very turbid urine from the left side, which showed 3200 pus

cells and sterile cultures. Urine from the left kidney was stained for tubercle bacilli and found positive, three plus."

He next discusses cases in which kidney results of the injury. Examination of a lesions are found that may not be the direct patient who received an injury, and stated that certain symptoms referable to the the kidney developed shortly after the injury, and that he was well up to that time, showed a chronic colon bacillus pyelitis. It is quite questionable that the pathologic conditions was the result of trauma.

Dr. Kretschmer brings out the fact that X-ray pictures are frequently wrongly interpreted. Shadows, suggestive of stone may be seen and taken for such, when in reality there is no stone present. The supposed stone was then held to follow the injury. Passage of ureteral catheters, pyelogram and ureterogram then definitely shows that the shadow seen was not that of calculus.

The above discussion clearly demonstrates the importance of careful urological examination following a history of trauma to the kidney, especially to fix a liability.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

BASAL METABOLISM

Basal Metabolism is a term applied to the "minimal activity of the body which maintains the functions of respiration, circulation and secretion."

Sanborn states that this may be expressed in terms of heat production or of gaseous exchange incident to heat production, e. g. carbondioxide production and oxygen consumption.

These gaseous exchanges may be determined by any one of several types of apparatus.

There is not a body movement, voluntary or involuntary, which does not result in the liberation of energy. This energy represents metabolism. The rate at which this metabolism takes place can be mathematically calculated.

It has been shown that the basal metabolic rate varies in normal individuals at different ages, also that height, size, weight, and sex affect it. A normal standard or rate has come to be generally accepted, in much the same way as has a so called normal blood pressure reading. When a thermometer re-

gisters an oral reading of 98.6 F, that reading is generally accepted as being normal.

In metabolic studies the zero line is accepted as the standard and readings are recorded as a plus or minus. It has been clearly shown that a normal rate for an individual may have a variation above or below the zero line of at least 10 points.

The basal metabolic rate is determined at ordinary room temperature, the patient at rest in the recumbent position, and in the fasting state for at least 14 hours.

The female runs a rate of 7 per cent lower than the male. Menstruation has a decided effect, the rate being increased 5 to 10 points during the seven days immediately preceding the flow.

Sleep reduces the rate. A lingering illness also tends to lower it.

Muscular exercise, above all other agencies, profoundly changes the rate; increasing it in proportion to the severity or vigorousness of the exercise. Simple movements like sewing, reading, and walking accelerate the rate, whereas swimming, fast bicycle riding, bag punching and other gymnastics raise it ten, twenty, thirty or more fold.

Metabolic studies reveal that the ingestion of food results in the liberation of energy for from 10 to 12 hours. Hence, in making metabolic readings, the experiment must be done on an empty stomach of at least 14 hours duration.

Du Bois has proven that the ingestion of 200 grams of glucose increased the heat production 12 per cent, for from 3 to 6 hours, and Lusk has shown that heat production in man increased 46 per cent after ingestion of a large protein diet.

In addition to the above, fear, fright, anxiety, apprehension, air currents, pregnancy, smoking and the like all effect heat production and raise the metabolic rate.

From the above, it is obvious that to attain the true basal reading, these agents, intrinsic or extrinsic, must be eradicated before the test is made.

The metabolic rate is largely dependent upon the activities of the thyroid gland. This gland has been spoken of as the ignition system of the body. It is the meter designating the rate at which the body burns up its fuel and sets forth the volume of work done as the water meter tells the volume of water consumed.

Any condition increasing the activity of the gland, increases the metabolic rate and in like manner any condition decreasing the activity of the gland decreases the metabolic rate.

As an aid in differential diagnosis a Basal Metabolism apparatus is a necessary adjunct to any well equipped laboratory.

Every clinician recognizes the great difficulty at times in differentiating between mild hyperthyroidism and exaggerated neuropaesthesia. Yet, recourse to the metabolic rate will invariably identify the disease.

In like manner, not infrequently, cases of early pulmonary tuberculosis simulate hyperthyroidism so clearly, that only the metabolic rate will reveal the true condition.

Patients with tachycardia, restlessness, excitability and some tremor often can only be definitely stamped as cardiac in contradistinction to thyroid by metabolic study.

The metabolic rate also goes a long way towards revealing the severity of the thyroid toxemia, when it is present. A reading of plus 50 or plus 60 would indicate a more severe condition than would a plus 20 or a plus, 30.

As an aid to goiter surgeons it is almost indispensable. Here, however, it is not absolute, as once in a while the clinical symptoms appear comparatively mild whereas the rate might be unduly high, or again, the symptoms might be quite severe and yet the metabolic rate be low. In such a case the entire picture must be considered, for it is known that a patient on the ascending wave of a convalescent thyroid curve often is a fair surgical risk, even though the rate be high for the time being.

In other words metabolic study is as essential to the surgical and medical aspects of the thyroid problem, as is the wasserman

reaction to the luetic problem, or as is the blood sugar per cent to the diabetic problem.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
Superintendent State Training School,
Clinton, S. C.

"DEMENTIA PRECOX"

A very common mental disorder. As the term implies, it is essentially a disease of puberty and adolescence, and is sometimes given the name, adolescent insanity. A good many cases develop later in life, but the deterioration is so slow and the environment favorable so that they go unobserved until the third and possibly the fourth decade. Statistics vary as to the percentage of our insane population caused by this disease. It is safe to assume that the percentage will run as high as thirty (30). It occurs more frequently between the ages of 18 and 30, and usually terminates in a chronic dementia, which renders the subject unfit for life in society. Many of the patients live to an advanced age, and as a rule spend most of their lives in institutions. The course of the disease is exceedingly varied and complex. Because of the great variety of symptoms presented, the cases are usually grouped, for purpose of study, into three classes as follows: Simple, Hebephrenic, Catatonic, Paranoid and Mixed. In practice many of the cases observed are found to be mixed.

Some of the symptoms commonly observed are: general apathy, comparative indifference to surroundings, expressionless face, anger without cause, fear, timidity and peculiar habits. Some of the forms give forth more striking symptoms at the beginning, such as excitability, mutism, memory disorders, incoherence, impulsive

acts of violence or destructiveness, delusions and hallucinations. Not all of these symptoms will be found in a given case, but any one of them is suggestive and if several of them are present, the case should be kept under careful observation. Some cases are frequently confused with manic-depressive insanity, especially when the patient is talkative and rambling. The same is true with reference to general paresis, but in this condition the changes in reflexes and the laboratory findings serve to make the differentiation. In times past, it was not uncommon to confuse the deterioration of alcoholics with this disease, especially in a precox addicted to alcoholism. But this drug does not now play as important part in the role of insanity as in the past.

It is almost worthless to enumerate the various symptoms of this disease without making a differential diagnosis between it and other forms of mental trouble. This, however, would occupy several pages. When this disease begins, it is natural for it to progress until there has been a noticeable deterioration of the subject.

The deterioration as well as other prominent symptoms may be slow and interrupted with remissions, during which time the subject may perform a reasonable amount of satisfactory service in life. As to memory, it is common to observe that chronic patients that are afflicted with systematized delusions and obviously peculiar hallucinations, may possess an accurate memory for occurrences of the remote past. In this case it is

common to find them with very poor memory, for recent events, which is due to what may be called a "blocking" or disorder of the attention. They fail to concentrate upon any subject under discussion, and show a distinct shallowness of thought content. Their insight is poor. They are usually oriented. They may interject a senseless remark into what seems to be a normal conversation. In general, the diagnosis between this disease and manic-depressive insanity is what we are called upon to make. In order to do this we should endeavor to obtain a previous history. This condition, usually beginning early in life—if carefully followed—shows a gradual slipping back and maybe a peculiar personality. Later one may observe some of the syptoms already mentioned. During the precox stupor, which might be confused with the depression of a manic, they often retain the urine and saliva for hours. They may refuse food on the ground

that it is poison, or due to a peculiar negativistic, or blocked, condition. The manic usually fails to take food as a result of his hyper-activity—too busy. The precox delusions are usually protesque in character, while the manic delusions are apt to be self-accusatory. The excitement is of an incoherent character rather than showing any relation to the environment, as is common with the manic excitement.

The prognosis is poor. Complete and permanent recovery is rare, if it ever occurs. Considerable improvement is seen in a few cases. Some of the precox cases make good institutional workers under supervision, they rarely show any initiative, however, and most of them have periodic attacks of excitability. During the delusions attempts at suicide may occur.

As in many types of mental trouble, heredity plays an important part in this disease.

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MINUTES

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MINUTES OF HOUSE OF DELEGATES

ROCK HILL MEETING, CONTINUED

Report of the State Board of Medical Examiners of S. C. For the Year 1921.

Applicants for Examination.	
Doctors June Examination -----	24
November Examination -----	10
Total -----	34
Nurses June Examination -----	66
November Examination -----	42
Total -----	108 142
Doctors	
White males (including 1 Osteopath and 3 Chiropractors) -----	30
Colored males -----	3
White females -----	0
Colored females -----	1
Total -----	34

Nurses	
White -----	100
Colored -----	8
Total -----	108 142
The Board met at Columbia, S. C. in July and December 1921 to tabulate the grades made by the applicants at the June and November Examinations, with the following results:	
Doctors	
White passed (including 1 Osteopath and 2 Chiropractors) -----	28
Colored passed -----	3
White failed (including, Chiroprac- tor) -----	2
Colored failed -----	1
Total -----	34
Nurses	
White passed -----	87
Colored passed -----	7
White failed -----	13

Colored failed ----- 1
 Total ----- 108 142

The Board now reciprocates with the following States: Alabama, Georgia, Kentucky, Louisiana, Maine, Maryland, Missouri, New Hampshire, North Carolina, Pennsylvania, Virginia, West Virginia and Wyoming.

A. Earle Boozer, M. D.
 Secretary.

REPORT OF COMMITTEE ON PREVENTION OF VENEREAL DISEASES

The problem of the prevention and control of venereal diseases still looms great and unsolved. The subject is so large that only a few suggestions may be made within the scope of this report. These have been diseases of the ages, and on account of the manner in which they are usually propagated, you gentlemen readily understand that until some specific is developed to immunize the race, we must in other ways necessarily always be combatting them. They are to a very definite degree, in our opinion, shaking the physical and social foundations of the human race.

The following are some of the modes of attack that have been or could be launched against them:

- (1) The suppression of prostitution.
- (2) Public education on their nature, devastating effects etc., and the advantages and necessity of continence.
- (3) The physical examination of those who apply for marriage licenses.
- (4) The use of prophylactic measures
- (5) The treatment of those already infected.

It will readily be seen that no one of these is a panacea; and that all of them combined is only theoretically.

The suppression of prostitution. Every effort should be made to suppress this shameful vice. However, for the present this is a problem that extends far beyond the pale of the law. Public houses of prostitution may be abolished, but prostitution never will be. At any rate any source for infection should be destroyed.

Education of the public.—This should be full, thorough, frank, unbiased, and no point pertaining should be withheld, veiled, or obscured. The utmost frankness is desired. It is only by knowing the truth of things that

anything can be intelligently attacked. Of course, discretion and judgment must be exercised in everything. More publicity in the public press, properly done, should be given to the subject. It will do good and could not have the bad moral effects as reports of scandal that often comes out in the papers. Lectures, literature etc are valuable. These two last ways have been practiced to advantage in the last few years. It should be impressed upon the public that these diseases invade the homes of the rich and poor; high and low alike and in large proportions.

Education in regard to the practice of continence.—The principle of this is undisputed as being splendid and sound. But this is another plan in which the idea is easy to state but most difficult to put into practice. We are of the opinion that Dr. Stokes aptly expresses:—"The prevention of syphilis by sexual self-control goes down to the foundations of character, and has practical value only in those whose self-control is the expression of life long habit of self-discipline bred in the bone from childhood, not merely painted on the surface at puberty." He sums up the moral prophylaxis as follows: "The repression of as many of the recognized agencies for the spread of the disease as possible; the making of continence a preparation for a normal sex life rather than an end in itself; the control and remedying of those influences which are making normal marriage harder of attainment;" (he refers to the economic conditions, in high cost of living, which acts as barriers to the attainment of marriage until many years after sexual development) "and the development of an instinctive self-control and self-discipline in every field of life from childhood up as the character basis necessary to make knowledge about sexual life and sexual diseases effective."

The physical examination of those who seek marriage licenses. We strongly urge the necessity for this.

The use of prophylactic measures.—The use of the condom has long been in existence, while it has undoubtedly saved a great many infections, it will not be used by the vast majority of indulgers in illicit venery and consequently as a prophylactic it is conspicuously ineffective.

We are in full accord with the plan of attack on venereal diseases as advocated by

Dr George Walker, who last year addressed this society and recently gave a lecture on the same subject before the Public Health Institute held in Columbia. That this would be an invaluable aid in preventing venereal diseases can not be disputed, for he has the records of the army to prove it. Of course it will fall far short of a panacea in civilian life, but would undoubtedly prevent many cases.

In short, he advocates: The establishment of prophylactic stations, similar to those in the army, in the large cities where those who expose themselves may go; that in the smaller cities and communities, let the State Board of Health furnish either free of charge or at a nominal cost packages containing the necessary drugs with full directions for use; or provide them in some other easily accessible way. In this way, we think that countless millions of cases in course of time can be prevented.

Moral persuasion in itself is conspicuously inadequate. Sublimation of ideals is to be attained only in the distant future, farther than the human mind can see. So, while we are on this long and difficult journey to the Utopian fields, let's apply, if possible, some other means whereby we can save the physical souls of men, women and children and prevent so many of the countless millions who are bound to fall by the wayside, in the meantime, from untold suffering with an inestimable damage to our whole human structure. We do not believe that the moral side of man will be even to the slightest degree effected by the inauguration of prophylactic stations. While those who oppose it are sincere in their belief on the grounds of morality, we do not believe as they do that it is an immoral innovation or conducive of immorality. Our vision of human nature sustains us in our view.

Treatment of those already infected.—We also think that the venereal stations for the treatment as established in some of our cities have a distinct value in more ways than one. It cures and thereby prevents in many instances the spread of the disease to society in general, but more especially to the innocent wife and child; it saves the infected person from untold suffering; it increases his working capacity to provide for his family; it saves some from pauperism and mental disturbances, thereby relieving the state from the obligation of caring for them; it helps

to maintain the happiness of the household; it teaches the necessity for the prevention and treatment of such diseases; in numerous and unsuspected ways it does good.

Through the kindness of Dr. C. V. Akin, formerly State Venereal Disease Officer, of the U. S. P. H. S., we have herewith attached an "Analysis of work done in state clinics with financial summary."

Respectfully submitted,

Milton Weinberg, M. D., Chairman
T. M. Davis, M. D.

Committee On the Prevention and Control of Venereal Diseases.

ANALYSIS OF WORK DONE IN STATE CLINICS WITH FINANCIAL SUMMARY

Cases Treated In Venereal Clinics During 1921:

Syphilis, male and female -----	16,550
Gonorrhoea, male and female -----	13,916
Chancroid, male and female -----	1,251
Total cases of venereal disease treated -----	31,717

TOTAL EXPENSE OF WORK, including administration, operation and maintenance of clinics, and cost of medical and surgical supplies and equipment ---- \$64,170.70
A comparison of the figures showing cases treated and the cost of the work indicates a per capita cost of ----- \$2.02

ESTIMATED VALUE OF WORK PERFORMED AT LOWEST PROFESSIONAL RATES:

16,550 cases of syphilis at \$100.00 per case -----	\$1,655,000.00
13,916 cases gonorrhoea at \$25.00 per case -----	347,900.00
1,251 cases chancroid at \$25.00 per case -----	\$ 31,270.00

TOTAL ESTIMATE VALUE OF WORK DONE ----- \$2,034,170.00
Note:

It is impossible to state the value of this work in terms of disease prevention and in the saving of life, and the increased productiveness of the individuals benefitted.

Respectfully submitted,

C. V. Akin,
P. A. Surgeon U. S. P. H. S.,
State V. D. Officer.

REPORT OF FRATERNAL DELEGATE TO GEORGIA MEDICAL SOCIETY

House of Delegates,
S. C. Medical Association.

Gentlemen:

As one of your elected delegates, I had the honor and privilege of representing you at the Meeting of the Medical Association of Georgia, which met at Rome last May. First let me say that I was never better treated in my life and my visit will always be one of the bright spots of my life. The men love South Carolina and it was surprising the number of them who were from South Carolina or descendants of this State.

It was my privilege to see the unveiling of a fine monument to Dr. Robt. Battey, one of the pioneer abdominal surgeons and also to learn that the Medical Association of Georgia is behind a plan to have erected in the Hall of Fame, a statue and also a monument in Georgia to the discoverer of Ether as an anesthetic, Dr. Crawford W. Long. They have a standing Committee of eleven men who are working to not only establish Long's unquestioned fame as discoverer of Ether anesthesia but they will have some distinguished physician each year to pay merited tribute to Dr. Long by delivering an address on a scientific subject, this to be known as the "Crawford W. Long Oration."

I wonder how long it will be before our State Association will honor itself by erecting a statue to the incomparable benefactor of the human race, J. Marion Sims, the great South Carolinian?

The State Medical Association of Georgia has a three day session full of scientific papers and discussions, and with an entertainment of one kind and another. They have not only morning and afternoon sessions but night sessions also.

The house of Delegates meets two days during the session with the following order of Business.

First Day:

Called to Order by President.

Enrollment of Delegates.

Report of Secretary-Treasurer.

Report of Council.

Report of Committees.

Unfinished Business.

New Business.

Second Day:

Roll Call.

Report of Committees.

Report of Delegates to A. M. A.

Unfinished Business.

New Business.

It seems to me that we should adopt the plan of short meetings of the House of Delegates daily, so that problems that may come up in the Scientific session may be settled at that time and not have to wait until a year later.

I should have said the House of Delegates makes its reports to the Association the morning of the last day.

The first morning of the Scientific session brought up a question of "Free Antitoxin." The next morning the house of Delegates took the matter up for presentation to the State Legislature for action. A paper on "Chiropraxy" was read at same session and taken up by house of Delegates the next morning and action taken.

The Georgia Association has a strong feature which should be in our Association—Medical Defense. If a member of the Georgia Medical Association is sued by some disgruntled patient, the Medical Association of Georgia's Attorney answers the complaint in the name of the Association and defends the same. In the vast majority of cases the suit dies a-borning, when they know who is defending same.

The house of delegates of their association was very much pleased at reciprocal relations with South Carolina and they will send us two delegates next year and we are to send them two

The following Amendment was offered and adopted: Visitors, duly accredited to represent the associations of other states or of the District of Columbia, not exceeding three in number for each organization, may attend upon, read papers, and participate in the discussion of the general meetings, but shall not have a vote." Also that the registrar "shall provide for the registration of the members, delegates, and accredited visitors at the annual session." It was further moved that the Committee on Scientific Work be allowed the privilege of extending the courtesies designated in this proposed amendment to not more than two delegates from each state instead of three. It was further moved and adopted to amend that delegates from other states shall only be permitted to read papers on invitation of the Committee on Scien-

tific Work. It was moved that the President of the Medical Association of Georgia be empowered to appoint delegates, not exceeding two in number, to state associations as are accredited with exchange delegates to this association.

Georgia's problems are our problems and our problems are in many ways theirs and I am sure great good will come out of this reciprocity.

I would recommend the following:

1. Meeting of House of Delegates on at least two different days.
2. Evening sessions with only two afternoon entertainments.
3. Medical Defense Act.
4. Last but by no means least getting a memorial in the hall of Fame and a monument to J. Marion Sims.

In conclusion, it has been an inspiration and source of great pleasure to me to have been honored as one of the Representatives of this Association and if in my humble way I have helped in cementing the bonds of Friendship between the Sister States, I will be truly thankful.

Respectfully submitted,

P. V. Mikell, M. D.

(To be continued)

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ABSTRACTS

INFECTIONS AND INFLAMMATIONS OF THE INVESTING TISSUES OF THE TEETH.

Herbert A. Potts, Chicago (*Journal A. M. A.*, Sept. 16, 1922), in commenting on the pathologic changes which occur within the mouth, and the bearing which these changes may have on the more remote parts of the body, says: When, as a result of infection, the attachment of the fibers of the periodontal membrane is severed, we have not only a pus-soaked cementum incapable of repair, which exerts a negative chemotaxis tendency, but also the actual disappearance of the fibers and bone into which they were inserted, and the loss of the cementoblasts which make such a repair possible. Replacing this loss of tissues is a mass of suppurating inflammatory tissue not protected by epithelium, from which toxins and bacteria find their way into the system and through which other bacteria of the mouth may readily pass. Pyorrhea and chronic alveolar abscess, both propagated by dead cementum, are the results of two factors, gingivitis and death of the tooth pulp. The first requisite in the conservation of healthy teeth and their investing structures is the avoidance of gingivitis, which is caused by numerous faulty conditions, among which are salivary calculus and serumal calculus, which is due to (a) lack of contact of the teeth; (b) improper contact; (c) deviation from the normal, smooth contour of the teeth; (d) lack of cleanliness; (e) misuse of the toothpick, rubber-brand, floss-silk or tooth-brush; (f) overhanging margins of fillings; (g) ill-fitting crowns, etc. Pyorrhea is probably not due to any specific organism. The

greatest achievements in medicine have been in the prevention of disease rather than in its cure, and so must the greatest dental service be attained by prevention rather than by restoration. This prevention must begin with the eruption of the temporary teeth and continue at intervals, depending on the necessity of each individual, through life. Routine physical examination should include a more thorough oral examination, and the treatment of oral lesions should be based on a working knowledge of pathology. In the vast majority of cases, neglected gingivitis becomes chronic, and its duration, over a period of months or years, not only leads to a destruction of normal tissues both soft and bony, but is a menace to health in two ways: (1) by the constant suppuration with absorption and swallowing of bacterial by-products, and (2) by the entrance of bacteria themselves into the lymph and blood streams, with their arrest in distant parts where they set up other foci of infection.

THE NORMAL SELLA

Roentgenograms of the sella turcica in 100 consecutive cases coming up for examination for all types of disease, excluding persons who were clearly suffering from endocrine disturbance of any sort, and also excluding persons of clearly marked pituitary type, even though they were without symptoms referable to the pituitary, were taken by C. D. Enfield, Louisville, Ky. (*Journal A. M. A.*, Sept. 16, 1922). The ages ranged from 18 to 68; 55 per cent. were women, and the weight of the different subjects varied from 84 to 230 pounds (from 38 to 104 kg.). The width of the sella was measured at the widest point, and

the depth was measured by drawing a line from the superior surfaces of the clinoid processes and dropping a perpendicular from this line to the deepest portion of the sellar outline. In width, the measurements varied from 6 to 19 mm. In depth, the variation was between 3 and 12 mm. From this rather small series the conclusions are reached that the sella turcica in the normal person may vary both in size and in contour within very wide limits; that the average sella, which has usually been interpreted from the roentgen-ray findings as being the normal type, constitutes in the neighborhood of 50 per cent. of the general run of cases, and that wide variations from the average are not necessarily accompanied by any indications of pituitary malfunction or disease. The only definitely and positively abnormal roentgenographic finding is clear evidence of erosion of the bony structure.

Correspondence

Dr. Hugh R. Black after a number of years as assistant at the Mayo Clinic, has returned to Spartanburg, and associated himself with his Father and Brother for the practice of surgery.

A recent article by Dr. J. W. Jervey, entitled "Mastoiditis Hyperplastica Serosa" was among those chosen for translation in-

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BALTIMORE

to Spanish for the Spanish edition of the Journal A. M.A. of Sept. 1st.

The Pickens County Medical Society will give a big dinner to one hundred doctors, on Oct. 4th, at Central, S. C. A program of scientific and Public Health interest of great magnitude is in preparation.

That Prince of entertainers, Dr. L. G. Clayton, Pres. of the Pickens County Society, will preside.

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D., Supt. Training School for the Feeble-minded, Clinton, S. C.

EDITORIAL

CHATTANOOGA MEETING OF THE SOUTHERN MEDICAL ASSOCIATION.

The Southern Medical Association will hold its sixteenth annual meeting in its birth city—Chattanooga, Tennessee, "The Dynamo of Dixie," Monday, Tuesday Wednesday and Thursday, November 13-16, 1922. Dr. Seale Harris, Birmingham, Alabama, President.

This meeting will be made up of eighteen sections and conjoint meetings as follows: Section on Medicine, Section on Pediatrics, Section on Neurology and Psychiatry, Southern Gastro-Enterological Association, Section on Radiology, Section on Dermatology, Section on Surgery, Southern States Association of Railway Surgeons, Section on Urology, Section on Orthopedic

Surgery, Section on Obstetrics, Section on Eye, Ear, Nose and Throat, Section on Public Health, National Malaria Committee, Conference of Malaria Field Workers, Southern Hospital Association, Conference on Medical Education and Southern Association of Anesthetists. In these meetings every phase of medicine and surgery will be treated. The programs are unusually fine this year.

Dr. E. D. Wise, City Health Officer of Chattanooga, will deliver the Address of Welcome, which will be responded to in behalf of the Southern Medical Association by Dr. W. S. Leathers, State Health Officer of Mississippi, Jackson, Mississippi. Dr. C. C. Bass, Dean of Tulane Medical College, New Orleans, will deliver the Oration on Medicine; Dr. Hubert A. Royster, Raleigh, North Carolina, the Oration on Surgery;

and Dr. S. W. Welch, State Health Officer of Alabama, Montgomery, Alabama, the Oration on Public Health.

Of unusual interest will be the joint dinner session of the Section on Surgery and the Section on Radiology Tuesday night. Dr. George W. Crile, Cleveland, Ohio, will represent the Section on Surgery, and Dr. George W. Holmes, Massachusetts General Hospital, Boston, The Section on Radiology. All physicians and surgeons are cordially invited to this dinner session.

Entertainments include a President's reception with dance on Tuesday night and a dance and get-together meeting on Wednesday night. On Tuesday and Wednesday elaborate entertainments have been provided for the wives of the Physicians including sight-seeing trips over the historic points of interest, luncheon at Signal Mountain Inn, theater parties, etc. The Chattanooga Committee are anxious for a large attendance of ladies.

For those who golf, tournaments are being arranged. Chattanooga has several wonderful golf courses.

Scientific exhibits bid fair to be of unusual interest. In the health exhibits malaria control work will be featured. In connection with the scientific exhibits there is expected to be a moving picture theater at which scientific films will be featured all during the days of the meeting.

Chattanooga excels in beautiful scenery and in points of historic interest. Lookout Mountain, Signal Mountain, Missionary Ridge and the historic battle fields alone are worth a trip to Chattanooga.

The Hotel Committee promise comfortable accommodations for all who attend.

Special reduced railroad rates have been granted by all railroads on the certificate plan. The members of the Association will receive without applying for them a certificate entitling them to reduced rates. Any doctor who is a member of his state and county medical society, although not a member of the Southern Medical Association, who desires to attend this meeting can have the benefit of these reduced rates by requesting a certificate from the Association office.

ORIGINAL ARTICLES

GALL BLADDER DISEASE

By A. Johnson Buist M. D., Charleston, S. C.

Almost the first thing that strikes one in the consideration of Gall-bladder disease is the frequency with which it occurs in the human being. In spite of the fact that gall stones are found in only a percentage of the cases of Cholecystitis, never-the-less Schroeder found the former pathology present in 12.5 per cent of all autopsies held by him and Naunyns, statistics and those of Brookbank corroborate closely his findings. When we consider that Cholecystitis always preceeds Cholelithiasis and that many cases of the former condition never have stones formed in the bladder or bile ducts we must necessarily come to the conclusion, if the statistics of these investigators are true, that from one fifth to one quarter of the human race suffer from disease of the Gall-bladder at sometime in their existence. Undoubtedly, therefore, affections of this organ must take a foremost place in our consideration of the diseases to which mankind is heir and we must give it's possibility serious thought in our attempts to explain the various digestive and reflex symptoms of which our patients complain from time to time.

Time and the knowledge that time has brought us through the use of the dead house, the laboratory, the X-ray and abdominal exploration has familiarized us with the pathology of the diseases of the pelvic cavity, the intestines, the stomach and appendix, and has enabled us to harmonize the symptomatology of the lesions

of these organs to the pathology that exists, and through experience we know quite well when and how to treat these lesions. The mist that surrounds lesions in the upper righthand quadrant of the abdomen has, however, not yet been fully swept aside and even though the pathology be known the best treatment therefor is still under discussion.

There are several factors that enter into the production of gall-bladder disease. First and foremost is infection of the bile passages, and second, and of as much importance, is stasis of the bile. Indeed, it is doubtful if infection without stasis will produce disease and it is equally doubtful if stasis alone will produce pathology sufficient to give a symptomatology. There are certain predisposing factors that stand out prominently. Among them is age, although Thomson is able to record six cases of gall stones in the newborn and Still collects twenty cases in children, ten of these in infants. We find that in 9000 autopsies Naunyn found one in every 30 cases under 30 years of age and one in every six after sixty years of age. Bollinger found gall stones in 2.7 per cent between fifteen and thirty years 5.9 per cent between thirty and sixty 15.2 per cent above sixty, females are especially prone to Cholecystitis and Cholelithiasis. The relative frequency is usually placed at four females to one male.

Everything that tends to disturb the secretion of the bile, to alter it's composition, to impede it's flow through the biliary ducts, or to favor it's stagnation in the gall-bladder may be recorded as a predisposing cause of Cholecystitis. The apathy of age, arteriosclerosis and retarded metabolism explain the frequency of gall bladder disease in advanced age. Conditions incident

to parturition, the enforced invalidism consequent upon unrepaired genital lesions, the habitual constipation and relaxed perineum undoubtedly have much to do with bile stasis in the female. The pressure of the corset, displacing the gall bladder downward and inward, producing an angulation of the cystic duct possibly, also, is a causative factor. Stagnation of bile must necessarily occur and infection is all that is needed to produce disease. Obesity, enteroptosis, sedentary habits and confinement, conditions in which there is a surcharged hepatic circulation, are proximate causes. These facts may explain the frequency of gall stones among teachers, clergymen and obese officials. More than fifty per cent are found in brain workers, but that it is not brain work, but physical confinement and lack of exercise, is proved by the frequency with which the disease is found in the insane. The combined statistics of Beadles, Gorstell and Snell reveal that in 21.22 per cent of all autopsies upon the insane gall stones were present. According to Brockbank 21.8 per cent of those dying from mitral stenosis had biliary calculi, showing the effect of passive congestion of the liver and sluggish bile flow due to inactivity, in the production of gall stones. Climatic conditions and diet can hardly be considered as factors for the disease is world wide, found in every climate and amongst those accustomed to the most varied diet.

Undoubtedly biliary stasis with its concentrated bile and precipitation of its crystalline chemistry, plus catarrh, plus infection means Cholecystitis and later Cholelithiasis.

We have briefly alluded to the conditions producing stasis. How, then, occurs infection, the other chief factor? The bile in the bile ducts and gall bladder is normally sterile as has been proved by many experiments. The most common bacteria found in gall bladder disease are, in the order named, the streptococci, the staphylococci, the colon bacillus, the typhoid bacillus and

the pneumococci. It is evident that any of these may gain access to the bile passages in examining the contents of the gall bladder any of the following ways; by travelling up the common duct from the duodenum, by conveyance to the gall bladder through the blood or lymphatics, or infection may occur through bacteria filtered out from the portal blood by the liver. There is an increasing tendency to believe that infection seldom travels up the duct from the intestine for the normal duodenum contains few bacteria and when the valve of Oddi is open there is a constant current of bile, which is itself in its normal state antiseptic, into and not from the intestine. It is true that gall duct and gall bladder disease has been found where some intestinal parasite has invaded and infected the bile passages. Here the cause of the infection has been quite evident, but the condition is so rare as to need nothing more than its mention. We are coming more to believe in infection through the blood stream. The frequency with which oral infections, tonsillitis, suppurating processes in some portion of the body and especially chronic disease of the appendix, accompanies or have preceded gall bladder disease is more a coincidence. Some men of prominence claim that they never encounter Cholecystitis without noting also pathology in the appendix. The close blood relationship between the two organs makes the possibility of infection of the gall bladder from the appendix extremely easy. B. B. Vincent Lyon reports that he observed several cases of Cholecystitis following the recent pandemic of influenza and that he was able to recover from the bile the pneumococcus, the streptococcus, and the micrococcus tetragenus, three organisms so commonly seen in that epidemic. In several of these cases he proved an infectious gastritis and duodenitis existed and he believed that in these cases the infection of the bile passages extended directly from the intestine. Is it not possible that in a small percent-

age of cases infection takes place by transmigration of the colon bacillus from the duodenum or colon? You will recall the proximity of the gall bladder to both of these structures. The frequency with which we find these structures adherent, or if not adherent united one to the other by flimsy adhesions, suggests the possibility of pre-existing inflammatory disease of the duodenum or colon accompanied by a localized plastic exudate with adhesions to the gall bladder and subsequent infection of the latter organ in which the bile has become stagnated because of its loss of freedom of movement and power of contraction.

The symptoms of gall bladder disease are seldom characteristic; in fact they are often most vague, but this very vagueness together with our knowledge of the frequency of the malady should put us on our guard.

It is often only by a process of elimination that we can arrive at a positive diagnosis. The early manifestations of inflammation of the gall bladder or of gall stones will practically never be referred by the patient to the region of the gall bladder or bile ducts. The patients refer their trouble to the region of the stomach and not to the liver. "Indigestion" is perhaps the earliest symptom and it may be the only one, and persist for years. It may show itself in the form of nausea, vomiting, belching, eructations of gas and epigastric distress. These symptoms may be more or less constant. There may be periods during which the attacks of "indigestion" are most severe, and then they may entirely disappear only to recur at a subsequent date. There may or may not be localized distress or pain present and this distress varies from a local soreness or burning gnawing pain to a colic so severe as to produce in some symptoms of collapse. The dull pain is usually due to some irritation or inflammation of the gall bladder and its over-distention with bile, while the sharp, colicky, agonizing cramps indicate some obstruction in the bile ducts. The ingestion of food has the effect of

increasing the distress and the colicky pains can be produced by placing food in the stomach or relieved by the emptying of that organ. The normal contractions of the stomach are accompanied by similar contractions of the gall bladder, while rest of the stomach produces a similar state in the gall bladder, hence the pain in the latter organ when the former attempts to functionate, the pain may be referred to various regions. It frequently radiates to the right subscapular region and occasionally to the left; to the epigastric region or umbilicus; to the front of the chest and neck and down the arm. Ochsner says that tenderness can always be elicited on deep pressure over the gall bladder and Boas describes an area of tenderness which is present in a majority of those suffering from Cholecystitis. This area is found to the right of the 10th dorsal spine.

Jaundice is a rare symptom. Only a very small proportion of the cases of Cholecystitis or Cholelithiasis ever become severely jaundiced. When this symptom is observed it is due to the impaction of a stone in the common or hepatic duct, to an infection of these ducts or to pressure of a large stone in the cystic duct upon the common or hepatic duct. Such jaundice is almost always preceded by colic, it increases gradually until the obstruction is overcome and then gradually fades away. Recurrent jaundice is almost pathognomonic of a "floating" stone in the common duct. When the jaundice is due to carcinoma involving the ducts or from a growth in the head of the pancreas the jaundice is painless, steadily increasing and does not disappear.

Fever may or may not be present. There are few lymphatics in the gall bladder and therefore slow absorption, hence when infection is confined to the gall bladder fever may be absent or only slight. Chills, fever, sweats—resembling malarial attacks—accompany acute infections of the bile ducts. Where the fever is constant and of a septic type, it indicates that the infection has

spread to the liver or surrounding structures.

Recurrent attacks of the condition called "biliousness", of migraine or sick headache or otherwise unexplainable attacks of arthritis may alone be the manifestations of gall bladder infection.

The most rational treatment of infection of the gall bladder is still a matter of debate. Where there are gall stones present they must be removed and in this connection I might say that the X-ray is of little value in assisting in the diagnosis. In only a small percentage of cases can the Roentgenologist demonstrate gall stones. The X-ray is of value, however, in assisting us to arriving at a diagnosis by a process of elimination. It can eliminate the stomach and duodenum as the source of the symptoms and make us focus our attention upon the gall bladder. Where there are stones or constrictions in the bile ducts they must be treated surgically. Where there is contraction of the gall bladder or infiltration or infection of it's wall throughout it must be removed. These are pathological conditions where the rational treatment is clearly indicated and we do not hesitate to adopt the most radical measures. The tendency in the surgical world today is to remove the gall bladder in all cases of Cholecystitis, with or without drainage of the common or hepatic ducts as may be indicated. Although I may place myself in the minority by so doing, I cannot agree that this is always best. I am not convinced that the gall bladder, like the appendix, is a useless, functionless organ. Let me recall to your minds the fact that the liver cells are constantly working and secreting bile, that this bile amounts to from a pint to a pint and a half in 24 hours. This bile flows into the hepatic duct and thence to the common duct and towards the duodenum. At this point it reaches the Ampula of Vater, the exit of which is closely guarded by the Valve of Oddi, which valve keeps the duct firmly closed until such time as food enters and

remains in the duodenum. At such time the valve relaxes and the bile flows into the gut to take it's part in the digestion of food. At other times the valve is closed and the bile is dammed back through the cystic duct into the gall bladder where it collects and remains until such time as it is needed. The gall bladder is richly supplied with muscle fibres, is capable of distention and contraction and, when called upon to do so, rapidly empties the bile within it into the duodenum. The anatomy and physiology of the structures shows us that nature intended bile to be poured into the duodenum only at certain times. The contractions of the gall bladder synchronizing with those of the stomach prove this. Now let us consider the effects of the removal of this viscus. It has been shown by Flexner that bile undiluted or unmixed with mucus, entering the duct of Wirsung will, after a while, produce a pancreatitis, but that if mixed with mucus no such inflammation occurs. We are all aware of the fact that the common bile duct and pancreatic duct not infrequently unite proximal to the Ampula of Vater. If the gall bladder be removed from what source will this necessary mucus come? Mann and Judd have proven that in many cases after Cholecystectomy there is a permanent relaxation of the Valve of Oddi and a constant flow of bile into the duodenum and that there is not necessarily a back pressure in the bile ducts and that this constant drainage cures the infection in the duct. That is true, but it is also true that many of these patients suffer from a chronic diarrhoea. Where the valve of Oddi does not relax there is a back damming of bile, a dilatation of the common and hepatic ducts to many times their normal size and not infrequently a biliary cirrhosis of the liver develops, and should the anatomy permit it, a chronic pancreatitis. It seems, then, to me, that the gall bladder has a function and that it's indiscriminate removal in all cases of Cholecystitis is not justified. Opposed to this

view are the facts that so many cases of Cholecystotomy are not cured. That gall stones recur in the gall bladder, that the infection is not overcome and that the patient is but temporarily relieved. Lyon has, by means of his duodenal tube and withdrawal of bile from different parts of the biliary apparatus, demonstrated the presence of infection of the gall bladder and ducts after Cholecystotomy and claims better results by this method of treatment than by operation on simple uncomplicated cases of Cholecystitis.

The thought occurs to me that the reason why Cholecystotomy fails, in so many instances, to cure, and that Cholecystectomy is now the operation of choice, is because we are often so late in recognizing and operating upon cases of Cholecystitis. In many cases years have elapsed since the onset of the disease; the invading bacteria have become well settled in an environment of stagnated bile and both microscopic and macroscopic changes have occurred in a viscus that makes its removal imperative.

It has been said that of every hundred cases of chronic indigestion forty are due to error in diet, twenty to the stomach itself and the other forty to lesions of the pancreas, duodenum, appendix or gall bladder. An early recognition of the disease under discussion might by proper instructions in diet and hygiene and by the removal of foci of infection save our patients not only years of discomfort and suffering, but conserve for them an organ that is not without its uses and prevent them from being subjected to an operation which is not without mortality and morbidity.

MALARIA IN CHILDHOOD

By R. M. Pollitzer, M. D., Charleston, S. C.

Malaria is not a rare disease, neither is it a new one. In all probability this infection was first, insofar as we know imported from Egypt into Greece. A thousand years before the birth of Christ it is mentioned in the literature. Hippocrates and Plato are said to have clearly described it. That very remarkable Englishman, Sydenham in 1723 accurately word-pictured malaria, though of course he knew little as to its etiology, for it was not until 1880 that Laveran working in his laboratory in Algeria found the *Plasmodium Malariae*. Ross proved in 1898 that the mosquito is the disseminator of the blood parasite. It is impossible to accurately estimate the incidence of malaria; for many who have the disease never see a doctor and many more cases are unrecognized, especially the chronic types and those in infancy. Yet we do know that in the South it is frequent, and during the past year in South Carolina there were 176 deaths, which however is a marked reduction from previous years. In Fairfax (our meeting place today) in 1920 there were 287 cases, reduced in 1921 to 35. This splendid public health work is most encouraging. For this reduction in Malaria has not been an accident, but brought about by the U. S. Public Health Service and our State Board of Health. Just as in the Canal zone this plague has been subdued, so in a short time in the Southland it will be conquered, chiefly by drainage. However today, right now, it is costing the South annually 50 million dollars. I have no intention of fully covering the subject of malaria, for that would require hours and days, but I do wish to point out some of the important facts in

Read before the Eighth District Medical Association, June 14, 1922, Fairfax, S. C.

diagnosis and treatment especially with reference to children. It is unnecessary to discuss with you who are practical men, the subject from the laboratory or the pathological side. Our endeavor as doctors is to recognize our cases, and to properly treat them. Of course as in all infections we must consider ways and means of protecting the general public. But by curing each case, and screening it while infected, we do prevent the mosquito from getting access to the parasite laden blood.

The impression has commonly prevailed that Malaria is rare in children. This is an error. It affects all ages even the newly-born. Deadrick says that "children are more frequently affected than adults, because of their more delicate skin, sounder and more prolonged sleep, and their inability to defend themselves against mosquito bites." "Of 2,073 cases of Malaria observed by DeBrun 1,065 were children under 8 years. The percentage of infected children in a given locality is the index to the prevalence of malaria in that region." Further this disease is more fatal in the young. Of 2,377 deaths tabulated by Strachan, 1,703 occurred in patients under the age of five." In various parts of Africa Koch found from 80 to 100 per cent. of children under the age of two to be infected." It is unnecessary to discuss the various etiologic factors, such as climate, altitude, time of day etc. These things are now common knowledge.

Further it would be consuming your time to no purpose to talk to you of malaria in the adult, for chill and fever at more or less regular intervals especially when conjoined to enlargement of the spleen is so clear that he who runs may read. In the child however especially the little child or infant the symptomatology is frequently quite different. And right here let me parenthetically state that unless you are so fortunate or so scientific as to examine or have examined the blood of every fever patient you must rely on the history and

the physical examination as the basis for your diagnosis. By no means would I have it thought that the microscope is not most valuable, but we must admit that oft time the parasite is not found on routine examination of the ordinary smear, even when present within the body. On the other hand I do believe that a leucocyte count is often of great value in excluding septic condition or other acute infections. Furthermore a rough hemoglobin estimation by the Talquist scale, showing marked reduction is always suggestive, when combined with other findings.

Malaria is poorly described in the usual text book on pediatrics, for most of our authors have had very slight actual experience with this disease. My experience with Malaria has not been very large, but I have been in the position of seeing many cases which had been treated previously by one or more doctors before being brought to me. Over and over again I have been struck with the fact that the diagnosis is made on insufficient evidence such as simply an unexplained fever which has lasted a few days. The per cent. of times that fever is accounted for in children bears a direct relation to the number of times a physical examination is made. As a rule a case that is diagnosed and treated for malaria and then brought to me is almost sure to have some other condition, otherwise it would have recovered. On the other hand patients in whom malaria is not even suspected are the very ones who have that condition, unless some positive diagnosis has been made. I firmly believe that in this state more often we err in saying that a child has malaria than we do with any other disease. Just as some men think because a high percentage of negroes have syphilis it is safe to consider all as syphilitic. By so doing you will undoubtedly get all the syphilitics that come to you, but you do harm to the others. Besides that is not practicing medicine, for all of diagnosis and necessarily prognosis must be omitted.

How then does Malaria differ in the child. In the first place, the chill is rare. Usually it is replaced by a certain blueness of the skin or merely a coldness of the skin will follow. There is some prostration. Quite frequently a convulsion is substituted for a chill. While most convulsions in early life are due to bad feeding or spasmophilia yet this must ever be kept in mind. In early life the digestive system like the nervous is easily deranged thus showing first the onset of a disease. Vomiting may be due to many causes, but as a rule we do find vomiting in malaria. Along with this there goes a disturbance in motility and secretion of the bowel, producing a diarrhea. At times this leads to the snap diagnosis of colitis. The temperature as you know in children is by no means under so good regulation as in later life and perhaps for that reason the periodicity of the fever is frequently disturbed. Also unless the thermometer is used by some capable person, the skin temperature is very misleading. I have found all accounts of temperature variations by the family in this condition to be untrustworthy. Many sick children especially if lying down will be found to have rales in the chest. In malaria it is common to find them. This might easily lead us to suspect a bronchitis and there rest satisfied. Furthermore though rarely we do have a transient consolidation, which probably is not hypostatic, forcing one to diagnose pneumonia. Holt cites such a case. An enlarged liver from one cause or another is so common in childhood that it is here of no moment. An enlarged spleen though should always make us stop and consider. But by no means should we pin a diagnosis on this alone. For often in acute conditions does the spleen markedly enlarge. Leaving out typhoid, I might mention meningitis, and infantile paralysis as those I have noticed as frequent causes for enlargement. And conversely you cannot and must not rule out malaria because there is no splenic enlargement. Contrary to the books it has

been my experience that until several weeks have passed we can not palpate this organ. Therefore in chronic malaria (that is those cases that have escaped treatment or had insufficient treatment) a large spleen will be of greater diagnostic aid than in the child just taken ill where you are most anxious to tell yourself and the family the name of the malady. It is of no value to know that quite often albumin and casts are present in the urine, though blood of course is suggestive, provided scurvy, stone and a few other conditions are eliminated. Nevertheless a urinalysis in all cases thought to be malaria should be done so as to include or exclude pyelitis, for I know of no condition that more closely simulates paludism. Next perhaps in order of frequency is otitis media, purulenta or abscess of the middle ear. Unless the patient is old enough to tell you what is the matter you can not recognize this without an examination of the middle ear, unless the drum ruptures and the pus exudes. Over and over I have seen babies heavily dosed with quinine for fever without any improvement, because they were suffering from this condition. Extreme malnutrition which often causes fever, and tuberculosis because of its irregular temperature are also at times thus labeled. Nearly all cases of typhoid in children are first called malaria, which is less reprehensible than in the other instances. We might ask ourselves whether the diagnosis of malaria is so very difficult and what are the reasons for our failures?

The answer depends to a certain extent on the individual. In general however it will be found that the diagnosis is based purely on a history of fever which is generally irregular without any obvious explanation. And then the disorder having once been labeled even though recovery does not ensue in a few days with appropriate treatment, the diagnosis is persisted in. Where however the urine is examined properly, and other causes of fever are investigated this can not happen. When a case of real

malaria is overlooked it is usually because the physician is expecting the same symptoms as in the adult. He is not thinking about the vomiting, the diarrhea and possibly convulsions or coma. Nevertheless regardless of the ability of the practitioner, there are cases of malaria which will not be recognized without an examination of the blood-smear or the therapeutic test. However the therapeutic test should not precede a thorough physical examination. In other words do not give quinine to all sick children just on suspicion.

Let me here set down a few salient facts abstracted from my case-records of malaria. A white male M. D. N. of 9 months was brought to me after having been treated by several physicians. For 2 weeks he had been fretful and feverish. He was very pale. There had been some diarrhea. There were a few rales in the chest. Urine was negative. His blood showed the organisms.

A white girl S. L. K. aged 2 years had been suffering for 2 weeks with vomiting and diarrhea during Aug., 1917. The stools contained mucus, but no blood. She had fever and a cough. She was found to have the estivo-autumnal parasite. Contrast these two which undoubtedly had malaria and promptly recovered under quinine treatment with H. K. a white female of 9 months who had been having attacks of fever and vomiting of several days' duration for 2 months before her urine was examined and found to contain much pus. In order that we might gain a still better idea of the symptomatology of malaria in the child there are a few important findings gained from some cases seen in Charleston at the Roper Hospital which I wish to present.

1. W. Fem. B. S. age 4 years on admission stuporous. t. 102-120, p. 130, r. 40. 2 days ago began to vomit and had pain in abdomen. Pallor then noted. Vomiting continued. Bowels have been loose. Examination shows nothing except herpes lab. and nystagmus. Spleen not palpable. Urine negative. Hemoglobin 75, wb.c. 7,400.

Many tertian parasites present. Recovered.

2. B. A. w. male, age 2 yrs. "2 days ago awakened during the night with fever and vomiting. Fever continued and 48 hrs. later after being very restless he had a convulsion. Later in the day had 5 more. When seen the temp. was 100, p. 130 and r. 50., though a little later the temp. rose to 104. Examination practically negative. Leucocytes only 6,800. Tertian p. present recovered.

3. C. L. w. female age 5 yrs. took sick 4 days ago with no definite symptoms except fever the next day. Then became delirious and a little later comatose. Examination showed an enlarged spleen, albumin in the urine, and tertian parasites in the blood. Recovered.

4. B. B. c. female, aged 11 yrs. had been sick in bed about three weeks, with constant fever and weakness. Has not had chills or convulsions. There has been headache and abdominal pain present. Not eating. Examination disclosed marked anemia, anxious expression to face. Very rapid weak heart. Spleen not palpable. The blood showed a hgb. of 25 to 35 w.b. count of 9,340 and red cells reduced to 1,360,000. The urine had from 2 to 4 plus albumin with very many hyaline, granular and epithelial casts. In other words a nephritis. She had a 4 plus infestation with the tertian parasite. She went home a month later greatly improved.

I should like to take up some unusual instances of estivo-autumnal infection, for this type of the disease is by no means uncommon with us, but instead I shall spend my remaining time discussing the subject more generally. In considering the differential diagnosis I should have warned you against mistaking the sudden onset of malaria with cerebro spinal symptoms for meningitis, which can easily be done. Indeed a spinal puncture is sometimes necessary. As a rule an exposure to great heat as in summer in the field, where malaria has

been present for some time in a latent form in the person seems to be a predisposing factor to this. I saw such a meningeal case near Summerville, in the Summer of 1920. This boy was 5 yrs. recovered. These convulsive and comatose children however do not always get well. For I am sure that you have seen some die within a day as I have. Now just a few words as to treatment. The average person when sick welcomes his physician, but as soon as his acute symptoms such as fever, or pain have gone, the doctor is not wanted. At least the ambulant patient does not come to your office unless he is suffering or scared. Nevertheless it is your duty to your patient and to your community to see that an individual is cured. By cured I mean that he has been treated long enough not only to improve, but to get rid of his parasite. Bass of New Orleans who has written very extensively and thoroughly on the treatment of malaria after a study of over 25,000 cases in Mississippi from 1916 to 1918, states that very few people are disinfected when treated in the usual way. Indeed it is known to you all that individuals have recurrences of this plague at different seasons or on going to other localities. The reason is that they have never been cured. The parasite was merely in a different form deep in the body. He advises and urges that all malaria subjects should have quinine treatment for at least 8 weeks, and he has found that over 90 per cent of those treated will thus cease to be carriers. He advises that the usual sulphate of quinine be given by mouth three times a day 10 grains each, for 3 or 4 days then the treatment be kept up but the drug administered but once daily, preferably at bed-time. It is true however that some individuals may require 12 weeks treatment and that in desperate cases administration, intramuscularly or intravenously is necessary. These however are the exceptions. In children the dose of course is reduced. According to his figures, we should give but 1-2

grain of quinine three times daily under the first year. 1 gr. during the first yr. 2 gr. in 2nd yr. and 3 at 3rd and 4th. During the 5, 6, & 7 yr. 4 gr. t.i.d. and at the 8, 9, & 10 yr. but 6 gr. and not administering 10 gr. at a dose until the 15th yr. This is of course the scale laid down for the average case. Hereto, treatment must be continued for 8 weeks in order to cure our patient. The matter is simpler than in the adult for Johnnie's ma is more apt to make him take his medicine than she is to continue taking hers. While Dr. Bass is a most eminent authority and he has the official strength of the National malaria committee behind him yet I would not be dealing fair with you were I not to say that some writers give smaller doses, and others larger. I myself who of course have had but a small experience prefer to give more quinine than recommended even at the risk of wasting some of this valuable drug which when first introduced was actually worth its weight in gold. Today while intrinsically less precious it is a sine qua non. We must never forget that it is an absolute specific. As a rule other things being equal I find myself ordering after the first birthday from 8 to 10 grs. of quinine daily. During the 2, & 3 yr. about 10 to 15, and at the 4 & 5 about 15 to 20. gr. Of course these large doses are not kept up for more than 24 hrs, when there is a reduction, and again in 24 hrs. the dose is reduced. Further it seems best to give the quinine to children at more frequent intervals. As a rule it is easily taken in solution or suspension insyr. of yerba. santa. Holt advises 8 to 12 grs. during the first yr. and from 2 to 6 yr. 15 to 30 gr. daily. It is not unlikely that your dosage is different but after all the best plan is treating your cases is to treat them according to what gives you the best results. However I would stress again, that Bass is of the opinion that less than 10 per cent of doctors actually cure their malaria cases. So then all that I have been trying to tell you, this while, is that Malaria occurs in

children: that it is a common disease, that it manifests itself in various ways, especially by vomiting and diarrhea, and frequently convulsions. And further if after 3 or 4 days of quinine treatment there is no improvement, you should again carefully search for some other disease.

THE IMPORTANCE OF CERTAIN MASTOID AND LATERAL SINUS INFECTIONS OFTEN MISTAKEN FOR COMMONER GENERAL IN- FECTIONS.

By J. W. Jervey, M. D., Greenville, S. C.

In the past few years my attention has been repeatedly and forcefully called to certain cases of mastoiditis which have gone unrecognized for months and even years. Most often these cases have been in the hands of the general practitioner, without reference to the specialist, though often enough and even too often (for is not even once "too often"?) they have been unrecognized by laryngologists, and,—I blush to confess it—myself included amongst the errant consultants. These cases have, of course, all been of the chronic type of mastoid infection, but their proper and early diagnosis is often a matter of very present importance to the hearing, health and even life itself of the unfortunate victim. It is by no means seldom that the symptoms fail to point directly to the seat of the disease, and it is then only by a systematic effort at exclusion that the real offending area is first suspected. It is then that the history of a pre-existing middle ear disease is frequently, though by no means invariably, elicited, and careful study of clinical details combined with laboratory and X-ray findings

give a leading clue to the correct interpretation of the elusive syndrome.

Many of these cases have been and are today being diagnosed and treated by the attending physicians as malaria, atypical typhoid, tuberculosis, and what not, purely because of the erratic, though often apparently periodic temperature curves and vague symptoms, and because no demonstrable organic change is found that would otherwise explain the phenomena. And manifold what it should be is the mortality, because suspicion is not early enough directed to the real seat of the disturbance. For it is undoubtedly true that if these cases are recognized early enough and operated on in time, the mortality is practically negligible; while later, when vital structures have been invaded (as will almost inevitably happen eventually) the mortality is excessive.

It appears to be true, and is certainly so in my limited experience, that in many individuals the mastoid area is peculiarly tolerant of a low-grade chronic infection, and presents but little definite semeiology. But these cases progress just as surely as the others, and it is not until the intracranial wall is penetrated or the labyrinth or lateral sinus wall invaded, that symptoms begin to be assertive. But it is the cases confined to the mastoid area and those just commencing invasion of the lateral sinus that are usually the most puzzling; and it is to these that I should like to direct your attention, illustrating my meaning by a few very briefly abstracted case reports, as follows:

CASE 1: V. A., female, white, aged six years. Eleven months previous to my first seeing this child she had an attack of influenza, at which time earache developed and both ears discharged for several weeks. Ten days before I saw her intense pain developed in right ear and mastoid and right mastoid area was said to have been oedematous and tender on pressure. The ear soon discharged freely and pain was relieved. When I saw the case first, there were no definite symptoms of mastoiditis,

(Read at the annual meeting of the South Carolina Medical Association at Rock Hill, S. C., April 18-20, 1922.)

(Read by invitation before the Raleigh, N. C., Academy of Medicine, August 31, 1922.)

and no visible perforation of the tympanic membrane which looked approximately normal. I removed bad tonsils and adenoid and advised careful watching of the case. Six months later—seventeen months after first attack—the patient was brought in again by the attending physician. For several days she had been having a temperature ranging from 101 to 103, pain and discharge in both ears. At this time temperature was 101, pulse 168, both ears discharging freely. There was pronounced tenderness over right mastoid, thickening and deep inflammation of the right drum membrane, and marked sagging of the posterior superior canal wall. Radiographs plainly disclosed a pathological condition of the right mastoid, with cloudiness and destruction of cell walls. At operation the entire mastoid was found filled with pus and necrotic cells, and the antrum was full of pus. Amputation of the tip was necessary. Only the merest shell of the mastoid remained. Uneventful recovery. Evidently this case had been in progress a long time and diagnosis could and should have been made sooner.

CASE 2: D. F. S. female, white, aged five years. Treated for past year or more for chronic indigestion and glycosuria. Forty-eight hours before consulting me pain occurred in right ear. No discharge and no history of any. Subject to sore throat and expstaxis. Examination disclosed diseased tonsils and adenoid. Mastoid tenderness, right, and congested tympanic membrane; no perforation; sagging of posterior-superior canal wall; temperature 103 1-2, pulse 136, and weak. Mastoid operation revealed large quantity of granulation tissue and pus in antrum and cells—a condition of evidently long standing. Uneventful recovery.

CASE 3: R. C. F., female, white, aged 22 years. Has had occasional tonsilitis for several years. Appendectomy two years before consulting me, since which time she has lost weight from 140 to 118 pounds.

Abscess right middle ear six months later. Recently has developed severe arthritis left knee and ankle. Tonsils and teeth suspected by attending physician. Temperature 99, pulse 100. Definite indications of right chronic mastoiditis. Operation revealed merest shell of cortex and posterior canal wall; antrum granulations. Evidently long standing low grade infection. Uneventful recovery.

CASE 4: J. A. M., female, white, aged 32 years. Four weeks before consulting me had pain in right ear followed in a day or two by discharge. Had been feeling badly generally for some time, with anorexia. Diagnosis of mastoiditis easily made at this time, but the disclosures of the operation revealing extensive disintegration of mastoid cells, requiring amputation of tip, and large polyp growths in deep canal and middle ear suggested the probability that the infection was of long standing. Uneventful recovery.

CASE 5: J. W. B., male, white, aged 34 years. Had influenza a year and a half before I saw the case. Three or four months ago had both drum membranes incised by an otologist in another city. Right ear never discharged. At this time mastoiditis easily diagnosed in left side, and operation showed cortex broken down and through by necrotic processes, and large mastoid filled with carious disintegration and old granulation. Uneventful recovery.

CASE 6: M. Y., male, white, aged 19 years. Right ear has discharged off and on and considerable granulation shows in middle ear especially at eustachian orifice. Left canal filled with impacted cerumen, which, on removal discloses an apparently good membrana tympani. Removed pus tonsils and adenoid. Five weeks later severe pain in and behind left ear, with copious sero-sanguineous discharge. Just above and behind left auricle is a scar an inch and a half long which patient now says is the result of abscess in this locality several years ago. Diagnosis of

mastoiditis clear, and operation revealed very large area of necrotic bone and granulation tissue, with broken down cells all the way to the deep tip of mastoid. Uneventful recovery.

CASE 7: F. F. M., male, white, aged 50 years. Has had severe "cold in head" for several weeks. For several days past has complained of pain all over right side of head. Right drum membrane inflamed and bulging in upper posterior half. This was incised, releasing a sero-purulent discharge which cleared up within ten days, leaving ear looking apparently normal. For three weeks this patient's temperature ranged from normal to 102. At times he would seem perfectly well, and again he would complain bitterly of the pain in the right side of head, for which no clinical explanation could be found. He would occasionally become fretful and mildly delirious, swearing like a trooper, and remembering nothing at all about it. He would at times beg for morphine to relieve his pain, and once even broke his confinement in the early hours of the morning and sought another physician begging for the opiate. The possibility of his being a drug addict was seriously considered. At one time he seemed so well he was discharged from the hospital, but returned in twelve hours with a temperature of 102 and the old right parietal pain. The previous middle ear infection, though seemingly absolutely cleared up, was again taken into consideration. This, with definite mastoid cloudiness on transillumination and in the radiograph, coupled with a polymorphonuclear count of 84 per cent, the area of pain, and the erratic temperature curve led to a diagnosis of chronic mastoiditis with probable lateral sinus involvement, in spite of the absence of tympanic or deep-canal clinical evidences and the absence also of mastoid tenderness. The operation proved the event. Free pus was found in the antrum and about the bony wall of the lateral sinus. The sinus was uncovered and a great mass of infec-

tive granulations were curetted from its surface for a distance of three quarters of an inch at the knee. Evidently a case of long standing. Uneventful recovery.

CASE 8: M. G., female, white, aged 5 years. Seven months before consulting me on this occasion the patient's tonsils and adenoid were removed. At that time she complained of occasional earache, but no clinical evidence of middle ear or mastoid infection could be demonstrated. Seven months later a severe acute subperiosteal mastoid abscess developed within a space of five or six days. Operation revealed broken down cortex, posterior canal wall necrotic for two thirds of its depth, mastoid cells filled with pus and chronic granulations down to and including tip, and upward through roof making it necessary to expose the dura for an area about one-third of an inch in diameter. Antrum and middle ear packed with chronic inflammatory granulations. No doubt the process had been going on unrecognized since before she was first seen seven months previously. Owing to extensive necrosis of post-auricular soft tissues, healing of the wound was delayed for seven weeks. Otherwise, uneventful recovery.

CASE 9: J. L., female, white, aged 13 years. For a great part of twenty-six months, following removal of tonsils and adenoid, this child complained of slight pain and deafness in one ear or the other. When I first saw her, eighteen months after the tonsillectomy there was tenderness on pressure over left mastoid antrum and tip, and slight redness and sagging of posterior-superior canal wall, with a retracted drum membrane. Temperature 100, pulse 108. Radiographs showed apparent cloudiness of both mastoids. Differential blood count normal. Conditions cleared up in a few days without operative interference. Eight months later, during which interval occasional sharp pains in left mastoid were complained of, I again saw the patient. The clinical signs were more pronounced in

the left ear. The X-Ray report was that both mastoids were partially sclerotic. The left mastoid was opened, and found to be of ivory-like consistency through to the antrum, which was situated very deeply and was filled with fluid pus and granulomata. Uneventful recovery. Undoubtedly this was a case of several year's standing, and the sclerosing process was Nature's aid in checking disintegration of the mastoid. Probably we shall hear from the right ear later.

CASE 10: E. W., female, white, aged 7 years. Two years before this consultation I removed tonsils and adenoid. Child has not been strong. Has been treated for "acidosis" "influenza", severe epistaxis, "malaria" and has even been under suspicion of typhoid fever and tuberculosis. At time of present record has just had sharp pain in right ear and high temperature, and discharge from ear lasting four or five days and up to this time. This seemingly proved to be a furuncle of the canal and recovery was prompt. Six months later a severe left orbital cellulitis occurred with conjunctival discharge. No specific infection could be isolated microscopically. Temperature only slightly elevated. It was not erysipelas; there had been no injury; there was no sign of nasal accessory sinus disease. However, the *right* membrana tympani was slightly bulging in posterior-superior third. Four days later the eye was well, and there was a translucent bleb on the right drum membrane at the site of previous bulging, but no pain. This persisted with varying temperature and four days later was incised, evacuating quantity of sticky-sero-purulent fluid, with heavy infection of staphylococcus, temperature 102.3-5. Differential blood count showed 79 per cent polymorphonuclears. Next day conditions were better, but X-Ray examination showed cloudiness of right mastoid. Two days later there appeared a furuncle in the right external auditory canal, discharging. During this time a large boil appeared on right buttock and an enlarged gland in right groin. There

were one or two other boils on trunk, and it was thought the erratic temperature might be due to this furunculosis. The large boil on the buttock was opened and two days later temperature was normal. The furuncle in the external canal had cleared up; the drum membrane appeared normal. In a few hours the temperature was again erratic. The mastoid radiographs were submitted to Dr. R. W. Gibbes, of Columbia, for consultation. He concurred in the diagnosis of right mastoiditis and advised operation. The mastoid was opened and exenterated of broken down cells, mucopurulent secretion and pus. The bony wall of the lateral sinus was sloughed away over an area of six by twelve millimeters at the upper curve. The sinus at this point (which showed in the radiograph) was so far forward as to be somewhat in the way of entrance into the antrum. There were infective granulations on the sinus wall which were curetted away. The antrum and middle ear were filled with pus and thick sticky ropy muco-purulent secretion, which showed quantities of pus cells microscopically, but no bacteria with Gram stain. Recovery was prompt and complete.

In all of these cases every known method of diagnostic value was brought into play as the occasion seemed to arise; though I confess that in some of them the occasion did not impress itself upon me as soon as it might have, that is, in retrospect. All or nearly all of them were treated for varying lengths of time for various other diseases, and all made complete recoveries after the diagnosis (often extremely difficult) had been worked out and the classical remedy applied. They are not selected cases, but represent a consecutive series of cases of chronic mastoiditis that have come under my care and recognition. It is not too much to say that many of them would have gone sooner or later to a fatal termination if they had remained unrecognized. Ballenger very aptly quotes Macewen to the effect that one who has a chronic middle ear and mastoid

infection is like a person with a charge of dynamite in the head, and remarks that safety lies in removing the "charge".

The extreme cases, of course, are those in which vital structures are about to be invaded, and in my experience at least, threatened invasion of the lateral sinus is by far the most common *denouement*. In such cases, it cannot be said or emphasized too often, early diagnosis is likely to be the only hope of the patient; and this is possible in nearly every instance if the diagnostician is energetic and alert. The history of previous ear trouble is usually present as a clue; and this with the otherwise inexplicable eccentric temperature curve, the intervals of apparent normality, the vague parietal pains, the differential blood count and the Roentgen plates (which are of inestimable value) are usually sufficient to establish the diagnosis even in the absence of evident clinical pathology in the drum membrane, deep canal, or over the mastoid area itself.

In the early stages of lateral sinus thrombosis only the outer wall of the sinus is involved. This is first an agglutination and conglomeration of infective material on the surface of the sinus wall. Slowly but surely the infection penetrates the wall and a septic clot is started on the intima of the great vessel. Once this begins, it spells fatality if unchecked, and is not usually stopped except by operation carrying with it a mortality of perhaps 75 per cent, or even greater, while with early diagnosis and operation before the sinus wall has been penetrated by the septic agent the mortality is almost nothing in experienced hands.

Surely this is an adequate plea for careful study and prayerful consideration of these obscure and atypical febrile cases at the hands of the general practitioners!

DISCUSSION:

Dr. J. H. Taylor, Columbia:

I wish to emphasize here the value of knowing as soon as possible the bacteria which are causing the infection in mastoid cases. I used to think that these mastoid people were a little over-enthusiastic, and that there was a bit of charlatanism about the X-Ray folks. I wish to apologize now for those thoughts.

I have a boy three years old who complained a short time ago of a little pain and discomfort but not indicating where. I looked at his throat and found that his tonsils were a little reddened. He had no temperature. He had eaten ice cream that afternoon, so we gave him some milk of magnesia. The next night he cried again, so I sent for the ear man, who said that he had a slight reddening of both drums. The next night his temperature was 100, so I had Dr. Caughman puncture the right ear drum, and the next morning he got out a good deal of serum. Cultures were made, and the pneumococcus was found. The pneumococcus is the bacterium which causes the absorption of that thin plate of bone next to the meninges of the brain and when the pneumococcus gets through, there develops meningitis. We had some X-Ray pictures made before the puncture, on the strength of which Dr. Rogers told me that both mastoids were involved, but I was rather skeptical. But when we found the pneumococcus to be the infecting organism I was quite willing to have the mastoid opened. There was pus in it. Now, the boy had very little temperature. A fact noticeable frequently in these mastoid infections.

CREEPING ERUPTION, AN EFFECTIVE TREATMENT, WITH CASE REPORTS.

By H. A. Mood, M. D., Sumter, S. C.

Creeping Eruption is a disease, about which the medical text books have very little to say. A few lines is about all the space allotted to the subject. The medical journals however are reporting cases from various sections of the country, chiefly from the South and most of these are from Texas and Florida.

The disease is most common in Russia—also common in the Shetland Islands and in Norway..

H. Tamura (Brit. J. Dermat. March, 1921) reports a case of creeping eruption observed in February, 1918.

The worm was confirmed to be a species of *Gnathostoma*, and is called *Gnathostoma Siamense* because 4 cases were reported from Siam; 43 cases now reported.

The writer states that Knowles was the first in America (1916) to discover the parasite in section, and that without foundation he has asserted it was the *gastrophilus* larva.

In many cases the worm travels in the epidermia. In this writers case the tunnel made by the parasite was partly in the epidermis and partly between the epidermis and corium. The common feature in the cases reported is that a linear lesion is formed in the human skin extending day by day.

Report of case: Woman 41 years. Appealed to this writer on account of a pricking papule on the right chest, which proved to be caused by the *Gnathostoma Siamense*, and produced the characterisitic linear lesion. The lesion was opened and the parasite extracted under local novocaine anesthesia. It was 9 mm. long and 1 mm.

wide. Its color was blood-red. Put into human serum it made active, wave-like movements, which ceased about half an hour later. The entire lesion was excised. The rate of extension had been 4.2 cm in 22 hrs. 38 min.

Review of the Literature.

1. R. J. Lei's cases 1874—Clin. Soc. Trans. London 1875.

2. R. J. Lei's cases 1884—Clin. Soc. Trans. London 1884.

No description given of the parasite or tunnel.

3. Crocker's case (1892)—in which the larva had traveled in child's skin 2 years 3 months.

4. Newmans case (1895)—First case reported in Austria.

5. Samson's case (1897)—In Russia "Papular form—"

J. L. Kirby-Smith (J. Florida M. A. Oct. 1917), from Jacksonville, Fla., states that 80 per cent of skin lesions seen by him in young people during the summer months, or fall, if the rainy season has been prolonged, are of this nature.

The larva has been obtained by him on 3 occasions,—and by Dr. Henry Hanson, formerly of the State Laboratory. They agree as to the findings.

Dr. Rille, Professor of dermatology at the University of Leipzig also successfully recovered the larva. He is of the opinion that a fly of the *gastrophilus* variety is productive of creeping eruption in man. It is prevalent in the Southern States, near large bodies of water, or swampy regions, especially the Gulf and South Atlantic States.

Dr. Kirby Smith has had examined the stools of a number of patients with Creeping Eruption and no intestinal ova were found. It is not probable that there is more than one larva in the individual creeping lesion, nor is it conceivable that the larva has the function of reproduction in its wandering in the skin. The first few days the larva may only pass over 1-2 inch of

space, while at a later day several inches may be observed to have been covered during one night by the rapidly growing larva.

The patient can feel every turn in the boring movements of the larva and his suffering is great. No febrile or toxic condition has been observed.

Joseph V. Klander and Sigmund S. Greenbaum (Arch. of Derm. and Syph. 1921) also discuss the subject of Creeping Eruption. According to these writers, Creeping Eruption, or Larva Migrans, is a relatively rare disease in this country. There are only 13 references in literature to the disease occurring in the United States.

It is more frequent in children. The hands and feet and adjacent areas are most affected. Exceptionally the face, buttock and trunk.

The prominent cutaneous lesion produced is a burrow which is a raised, erythematous linear lesion, serpiginous and at times circinate in outline.

These writers assert that it is readily amenable to treatment, sometimes spontaneous disappearance of the disease. One of the cases was entirely cured in about 5 days after the daily application of tincture of iodine to the entire length of the burrow.

J. B. Shelmire (Texas So. J. M. Feb. 1918) says that Van Harlingen in 1902 reported the first case of Creeping Eruption in America. In 1903 and 1904 Stelwagon and Hamberger reported cases. The writer reported the next and first case from the South. He claims it is more common in Texas than in other parts of this country. Occurs principally during the warm months, carrying out the theory that the larvae are derived from the ground, after passing through the intestines of the horse. He claims the priority in the use of ethyl chloride as a treatment.

Dr. Whithouse reported a case (J. Cut. Dis. 1917) which during the summer had 38 distinct and active foci. The patient had contracted the disease on the Texas border

while a member of the U. S. Army. Four others besides himself, could definitely trace the disease to a certain ranch in Texas, where they slept on the ground.

Case: Child, age 2, probably contracted the infection from a sand pile. Having in 1915 promptly cured 2 cases by freezing with ethyl chloride, it was used in this case also. The spray was used for 40 seconds only. A decided blister was made and the larva destroyed.

As to treatment Smith says that the idea is to destroy the larva at one sitting, with a sharp scalpel shave off the epidermis over the end of the furrow and to some extent the nearby skin; this can be done with very little pain. Immediately apply a mixture of equal parts of tincture of iodine and phenol, next freeze thoroughly with carbon dioxide snow. This is easily done, but the ensuing blister is apt to become infected and it is some time before the parts are well.

The measure is not so applicable to lesions on the feet. The high frequency annodes is at times the most satisfactory measure, but in children this is hard to carry out, and is not so certain as the knife.

A number of caustics have been used, nitrate of silver, nitric acid, and carbolic acid, applied directly to the furrow, and painted around the extending lesion, but these measures can not be relied upon. Injections with a small hypodermic needle of various chemicals have been tried, among them chloroform, tr. iodine, formalin. It is a difficult and impractical procedure with a struggling child.

Keratolytic pastes and solutions have been tried with indifferent success, as has been the results with strong irritating solutions of bichloride of mercury.

The best palliative measure is the ice bag or ice cold water, with the parts so treated, for a few minutes the patient will have a short respite from the continual intense itching.

During the day there is very little activity

of the larva, especially on the exposed parts.

In "A Note on the Treatment of Larva Migrans," Lloyd W. Ketron (Arch of Derm. & Syph. 1921), says; since the parasite causing the creeping eruption lies in the skin some distance from the end of the visible burrow, its demonstration is difficult, either for the study of the insect itself or for its destruction.

The usual methods for destroying the larva are frequently unsuccessful.

They are:

1. Injection of various cauterizing agents.
2. Excision.
3. Iodine and phenol (Crocker).
4. Cocainize around end of burrow and inject chloroform (Hutchins).

5. Apply chloroform over the end of the advancing burrow 10 min. at a time, several times daily (Hartzell).

6. Apply cataphoretically a solution of mercuric chloride (2 grs. to the ounce) around edge of burrow and touch the suspected site of the insect with nitric acid. Stelwagon cured 4 patients with this method.

7. Method of Ketron or Shelwire. Which is as follows:

Case reported by Dr. Ketron:

Patient young man 28 years. Aug. 1920 foot became infected in N. J.

Treatment and Course: Usual methods were tried several weeks and were unsuccessful. Two larvae were found on same foot. Pure phenol and later injection of alcohol failed. Opening the active end of the burrow with a fine scalpel failed to locate the parasite.

Finally, an area the size of a 25 cent piece around the end of the burrow was frozen solid with ethyl chloride. Both sites of the infection were thus treated, the freezing causing practically no local reaction nor discomfort. Three months later patient reported he had had no further trouble.

Gentlemen; you have been given a short resume of the literature on this subject. It

will be noticed, that the remedies suggested by the different writers, do not seem to give uniform results. Whether this is due to faulty technique has not been proved.

The method used by the writer has been constant in results, painless and may be used without any fear of bad after effects.

Treatment: After having tried most of the remedies suggested in the limited literature,—this being in 1912—and several not mentioned, phosphorus dissolved in olive oil was tried, and its use was followed by most satisfactory results, not only in the hands of the writer, but in cases treated by other physicians.

Care must be taken in the preparation of the solution, because if too much friction is made it will tend to blaze. Any competent pharmacist will experience very little trouble in the making. Many minutes are at times required in getting the chemical to dissolve, depending entirely on the strength desired.

The strength of the solution found to be the most satisfactory is from 2 to 3 per cent of phosphorus in olive oil.

The application should be made all along the burrow, using some friction. A cotton swab rolled tightly will be found to be satisfactory. It should be used several times a day.

Case Reports:

Mr. D. Farmer, age 50 yrs. Seen June 10th. 1912. Presented two foci, one below the patellar, right knee, the other on the index finger.

The disease was easily diagnosed, having the characteristic linear eruption, the red elevated line near the active, itching extremity, and visicular where it had previously traveled. The intermittent attacks of itching, mostly at night, and the onward progress was typical.

Stelwagon had suggested high frequency, and it was given a thorough trial. This was used 14 times, until the skin showed marked burns, with out any but temporary relief. Phosphorus was used and in a short

while all of the symptoms disappeared, and have remained so.

This patient had used iodine for several days before consulting the writer, without benefit.

H. C. Age 5 years. Infected on dorsum of foot. Was seen at the time the patient just referred to was being treated. High frequency under general anesthesia used twice without relief. Phosphorus used and recovery prompt. No recurrence.

M. W. and P. Two little girls 4 years old, living in the same house and playing in the same sand pile were infected, each one on the dorsum of the foot. Recovery prompt in one, the other responded quickly when the strength of the solution was increased.

Mr. R. S. S. daughter. Age 3. Foci on ankle.

Was seen in consultation with another physician who had been using the treatment outlined. There had been no improvement. The strength of the solution was increased, recovery was prompt.

J. J. Farmer. Age 45. Infected ankle. Recovery prompt under treatment. No recurrence.

C. G. R. Bank President. Infected ankle. Prompt recovery. No recurrence.

Mrs. M. D. Infected inner ankle. Prompt recovery. No recurrence.

DISCUSSION:

Dr. C. J. Lemmon, Sumter:

Dr. Mood's paper is a distinct contribution to the literature on skin affections. I wish to congratulate him upon his original method of treatment. His treatment is very simple and requires no special technique.

The diagnosis is very simple if we remember that there is such an affection as Creeping Eruption, for the diagnosis is made almost by inspection. There is a lineal red line, which may be either short or long, or it may be curved, but it never bifurcates. The itching is most intense at night, the time when the larva burrow around in the skin.

There are two forms of effective treatment: excision, and Dr. Mood's method. Excision is objectionable because of the scar and the pain and discomfort of surgery. I would not recommend it when we have such a simple and effective method as Dr. Mood has described.

Before leaving home I called up four physicians in Sumter and asked if they had had any cases of Creeping Eruption. Two said that they had had from four to six cases. One physician said that he had tried almost all of the antiseptics mentioned in Dr. Mood's resume of the treatment, with unfavorable results. When he learned of the phosphorus method he used it with prompt success. All of my cases have been cured with two per cent solution, except one. I had Dr. Mood to see this case with me, he confirmed my diagnosis and increased the strength of the phosphorus solution to three per cent, and that effected a cure very promptly.

Dr. F. A. Coward, Columbia:

It is not usual for a general practitioner to go into work which really applies to public health. As Dr. Mood says, you gentlemen will be surprised to learn that we have such a thing as creeping eruption in this State, and that we have typhus fever and other things. We have these tropical diseases, and we are picking the nup one by one. What we want you men to do is to do what Dr. Mood has done, report them and let us study them. It is really intensely interesting.

When it comes to treatment, the Doctor's treatment is very clever, certainly very cleverly thought out, and I think that we owe him a vote of thanks for studying out this thing.

Dr. A. H. Hayden, Columbia:

There is something appalling in the ignorance of the treatment among general practitioners of these conditions. I had the privilege of seeing considerable original re-

search work by one who I consider today was at that time one of the greatest diagnosticians in America. I refer to Dr. John Guiteras, then of the U. S. Public Health Service, now of Cuba. He was the first one to discover filaria in Charleston, where he did some original research work and made some very elaborate reports about 1886 or 1887. That was in the days of the cisterns, which we do not have now. The first case was in a man who had, to my knowledge, several repeated attacks of chyluria, which Dr. Guiteras said was due to the filarial infection. This man happened to be a night watchman, and we could never find the filaria in his blood in the early evening hours. But when we thought it out, that his habits were the reverse of ours, since he slept during the day and was active at night, we examined his blood in the day time and found the filaria.

I also saw quite a number of cases of several forms of leprosy. There are quite a number of cases throughout the State, unrecognizable by the average man, and it would repay the profession to consider them.

AORTIC INSUFFICIENCY

Thesis by J. F. Woods, Member of the Graduating Class 1922, Medical College of the State of South Carolina, Charleston, S. C.

(Continued)

Diagnosis

The diagnosis of aortic regurgitation is not very difficult usually. Unless the disease is complicated by other conditions, such as mitral insufficiency, the diagnosis should be easy. The diagnosis demands the presence of a diastolic murmur at the second right or third or fourth left interspace. The murmur may be absent, in which case a certain diagnosis should not be made. The signs of left ventricular hypertrophy substantiated by X-ray plates if necessary, the peculiar arterial pulsation,

high pulse pressure, and the "Corrigan pulse" are enough upon which to make a diagnosis of aortic regurgitation. The pistol shot sound and Durozie's sign are confirmatory evidence. The differential diagnosis is harder. Dilatation of the aorta, grave anemias, tuberculous mediastinitis, mitral stenosis, and pulmonary regurgitation are the chief conditions from which the disease must be diagnosed. Dilatation of the aorta associated with aortic insufficiency is frequently mistaken for aneurysm. It may be accompanied by very marked pulsation in the second right interspace and even of the upper portion of the sternum, with dullness in these regions. The X-ray will clear up the diagnosis.

The existence of a functional aortic insufficiency from transitory dilatation of the aortic ring can only be definitely diagnosed when an aortic diastolic murmur and an abnormally high pulse-pressure have been present and passed off. This is a rare occurrence. From mitral stenosis and from pulmonary regurgitation, a very rare lesion, the disease is distinguished by the presence of predominating hypertrophy of the left ventricle with a heaving apex impulse and the arterial phenomena common to aortic regurgitation. Bronchial features may be present as in any other form of heart disease when pulmonary compensation is broken. The symptoms of arterio-sclerosis may cause confusion and must be differentiated, such as anginal attacks.

Prognosis:

In aortic regurgitation the prognosis is almost always towards a premature death, sudden or gradual. In some rare instances cases of aortic regurgitation have survived twenty-five and thirty years but this is quite an exception. The prognosis depends upon several factors such as the age, activity, habits, temperament, and general condition of the patient, together with the degree of the lesion and the specific kind of lesion. An accurate history upon which to partially base the prognosis can not al-

ways be secured as is evident from reviewing the cases of aortic regurgitation in Roper Hospital. The prognosis depends in a large degree on the kind and severity of the symptoms present, and as the symptoms are divided into two main classes, those occurring before and those occurring after decompensation, much depends upon the stage in which the case is first seen. Aortic incompetency may be fully compensated for years; the discovery of the lesion may be more or less accidental. When this is the case if the patient is warned and the true state of affairs explained to him, then with proper living there is a fairly good prognosis. As age advances the prospects of life grow less and less. Arteriosclerosis is generally coincident with old age. In the elderly, those beyond 40, the cause is usually arterio-sclerosis or else this condition is an associated one. In youth the lesion does not often result from sclerosis, and the coronary arteries are unaffected. The cases which last the longest are those in which the insufficiency follows endocarditis and is not a part of a general arterio-sclerosis. Co-existent lesions of the mitral valves tend to disturb compensation early. The prognosis in those who do laborious work is very bad. If possible a change of occupation should be made, choosing one that will not require heavy muscular work. Nervous, high strung patients offer worse prognosis than those of even temperament. Likewise those who have led an intemperate life do not withstand the ravages of the disease as well as those who have lived a moderate life. As has been stated, a low diastolic indicating peripheral dilatation acts as a safety valve to the diseased heart. The diastolic blood pressure is to be taken into consideration for this reason in making a prognosis. An increase in the heart vertically is of good omen, but an increase horizontally means that the reserve power of the heart is being rapidly consumed, and the prognosis should be judged accordingly. Angina pectoris in regurgitation is al-

ways menacing by vagus stimulation; yet if it persists it may be controlled by nitrites. If the bundle of His is intact, the heart may be protected by atropine, perhaps for a year or two; but the respite is a troublesome life—a life of pain, of slavery to drugs, and of bitter adversity, physical and mental. In regurgitation in the young the result of syphilis the prognosis is uncertain, but thorough anti-syphilitic treatment may check the disease.

When compensation begins to fall the prognosis is grave and more doubtful than ever for sudden death is imminent at all times. The degree of decompensation has a direct bearing on the prognosis.

Other sinister signs before decompensation occurs fully are increasing pallor, vertigo, tinnitus, arrhythmia, and an increasing frequency of pulse rate that is not temporary, denoting a larger residuum at each contraction and poorly filled arteries. An especially grave sign is a stationary or reduction in blood pressure following muscular effort.

When decompensation fails the main symptom is dyspnoea, or a tendency towards it on exertion in the beginning of decompensation. This tendency to dyspnoea is a good index of what is known as "the reserve power of the heart". In advanced cases of aortic regurgitation with pleural effusion and pulmonary edema it is easy to understand how the movements of the lungs are interfered with and dyspnoea is produced. But pleural effusion and pulmonary edema are rather rare in aortic regurgitation, not so in regards to the tendency towards dyspnoea. In such instances the tendency is caused by limitation of the movements of the lungs, which is due, it has been suggested, to an increased pressure in the pulmonary circulation with engorgement of the blood vessels and a consequent interference with the elasticity of the lungs. In patients with heart disease in general, aortic regurgitation included, Dr. Francis W. Peabody has measured this tendency to dysp-

noea indirectly by measuring the vital capacity of the lungs, which is the volume of air in a complete expiration after the deepest possible inspiration; or in other words he has calculated the decrease from normal in the limitation of movements of the lungs. The estimation of the vital capacity of the lungs can be made with a simple spirometer such as is found in almost any gymnasium.

In an attempt to simplify and make the estimation of the vital capacity of some clinical importance Drs. West, Dubois, Peabody and others have conducted a number of experiments. Dr. Peabody concludes that the estimation aids us in estimating the functional condition of the heart in that it gives direct indication of the tendency to dyspnoea and a fairly accurate quantitative index of the changes in the tendency to dyspnoea which are associated with the changes in the reserve power of the heart. So far the facts as brought forward by them have not been utilized by the profession as an aid in prognosis and treatment, but they may become of great value in the future. After all, the general condition of the patient as summed up by the physician after correlating the symptoms present with the physical findings is the best factor upon which to make even a guarded prognosis. Aortic regurgitation is the one cardiac disease especially in which must be remembered that "Man supposes but God disposes".

In the 63 cases studied from the records of Roper Hospital the average number of hospital days was 26.3. A large percentage of these cases entered as compensation was failing as evident from the symptoms given. Of the total number 64 per cent. was discharged improved, and 36 percent. died. There were too few autopsies reported to give any fairly accurate estimation as to whether the clinical diagnosis was the correct one.

(To be continued)

CANCER FROM THE VIEWPOINT OF THE PATHOLOGIST

By H. H. Plowden, M. D., Medical College of the State of South Carolina,, Charleston,, S. C.

Consideration of the Cancer problem by the Pathologist is not, in essential details, different from the view-point as held by the Surgeon and the Internist. He recognizes it as a constantly increasing menace, the cause of which is not known, and the cure for which requires proper education to each individual who, when considered collectively, constitute the population of the world.

The cancer problem, as it exists today, has a much greater significance than that with which the disease itself was invested by those who first fancied a similarity between its local manifestation, the tumor, with its "roots", and the crab, with its claws, and who applied to it the term "cancer" or "crab".

These ancients who studied the disease had no conception of its prospective importance as a problem of far reaching importance to the human race. The deaths from cancer today number more than a half million annually among civilized peoples alone. It is also certain that the disease is increasing with alarming rapidity, and affecting ever younger and younger ages. If these things be true, then we have here a problem which, if not solved, bids fair to almost exterminate mankind. Even if, as is certain, this is too grave a prospect, cancer is nevertheless the one major problem of medicine still defying any real approach to solution, as regards prevention, reliable early diagnosis, or guaranty of permanent cure.

The tumor was thought by early observers to be the manifest effect arising from the "roots" in the body because of some constitutional condition. Today we know that the exact opposite is true. The tumor is the starting place, and its "roots" are the

offshoots by which it sends out "runners" to the contiguous territory, extending further and further, by minute or by manifest passages, far beyond the original location, until the whole body is invaded.

So, today interest in the "cancer problem" has carried it, by one kind of "runner" or another, into every phase of life. Not only is it a topic for discussion in the operating room and the medical convention, but in the home, in the business office, in the lecture room, and even in the halls of legislation. "Is it contagious?" "May it be inherited?" "Is it caused by certain kinds of food?" "It is influenced by environment?" "Can it be cured?" and so on until the possibility of further questions has been exhausted. Therefore, the duty of the medical profession is to inaugurate a campaign designed to teach the layman the facts about cancer.

Much of the mystery which surrounds cancer, much of the ignorance concerning it, both within and without the medical profession, is due to the chaotic condition of the literature upon the subject. To acquire dependable information concerning any phase of the question entails tedious search through many books, pamphlets, and periodicals. To give a clear, concise, comprehensive and available resume of the world's work with reference to cancer, its history, distribution, etiology, diagnosis, possibility of prevention, and treatment, is a most difficult task.

With the awakening of wide-spread interest in cancer there will arise a definite need for a book of ready reference, of convenient size, giving in succinct and available form a summary of knowledge concerning the subject, and the next rational procedure should be the undertaking of such a task by a man of the medical profession whose standing is secure, whose reputation is national, and whose word is truth.

The professional responsibility of the Pathologist, in this country, at least, ends with the confirmation or the proving of the

incorrectness of a diagnosis of malignancy either at or after surgical operation. The distinctions between benign and malignant tumors involve questions of interest from both the theoretical and the practical sides. If malignancy were a purely clinical conception it would be impossible to draw any rigid distinctions between benign and malignant tumors since nearly all tumors may occasionally prove fatal. Yet the tendency is to restrict the term to tumors which exhibit certain features which are essentially deleterious to the host. The most important of these features are infiltrative growth, local destructive properties, recurrence after removal, formation of metastases, local interference with function and general toxic action of absorbed tumor products. These elements involve both anatomical and clinical effects.

Infiltrative growth is the most important of the anatomical factors in malignancy. This property facilitates local and general extension, renders removal difficult, is responsible for many recurrences, and is a constant preliminary to the local destruction of tissue. The controlling influence of encapsulation is seen in the harmless course of many very cellular tumors which may readily be enucleated while circumscribed but which on rupture of the capsule take on infiltrative and malignant properties.

Rapidity of growth is usually associated with infiltrative qualities and deleterious effects, and, if carefully separated from simple increase in size from other causes, is a nearly constant sign of a dangerous tumor. Local destruction of tissue is a variable feature prominent only in certain types of tumors, appearing early in squamous epithelioma, and constituting the sole malignant quality of rodent ulcer. In benign tumors, tissue destruction is a secondary effect of pressure. Hemorrhage from destruction of vessels may be the chief factor in cachexia which marks the course of many ulcerating tumors as in the stomach and uterus. Pain from nerve involvement

is often and even the last clinical problem in the course of a malignant new growth.

Formation of metastases may be held to constitute any tumor malignant. Being usually the result of infiltrative growth, invasion of vessels, and cellular character, and indicating collapse of defensive powers, it is the most impressive external sign of malignancy. It is, however, by no means constant in malignant tumors, as in glioma, rodent ulcer, etc., and certain tumors otherwise benign may rarely give rise to distant secondary growths, as chondroma and myoma.

The prediction of the course that a given tumor will take is based upon two sources of information, anatomical and microscopical diagnosis and accumulated experience regarding the usual behavior of tumors of known histological structure.

The main subdivisions of tumors into benign and malignant is accomplished at once and, as a rule, only by microscopical structure. Under some circumstances, the microscopical structure may stand alone and over-ride all other considerations. Far more usual is it to find the interpretation of structure to be greatly influenced by clinical information regarding the exact location of the tumor, its attachments, the presence of a capsule, the age and condition of the patient.

A fairly general idea of the malignancy of a tumor may be based on the distinctions between *adult*, and *embryonal* or *anaplastic* growth. It has long been recognized that the greater the variation in type between a tumor and its originating tissue the more malignant the tumor. Yet here is encountered the difficulty of distinguishing between original embryonal qualities and signs of acquired anaplasia. One group of tumors arises from embryonal cells which have lagged behind in development and such tumors bear an embryonal stamp. The histological signs of this embryonal character are often difficult to distinguish from the signs of anaplasia. The theoretical value of the distinction between embryonal and anaplastic cells is not, however, equaled in importance, since both types of tumors, especially the latter, may be malignant. The histological signs of anaplasia, or ordinary malignancy, are a cellular character, marked variations in size in either direction from the originating cells, increase of chromatic nuclear substance, abundance and abnormality of mitoses, and loss of polarity and diffuse infiltrative growth of cells. Equally important are the general signs of unusual nutrition and vitality of the cells. Upon these features one may safely base the estimate of growth and potential malignancy of tumors.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

HAEMATOGENOUS INFECTION IN TRICHOPHYTIA

Prof. E. Bruusgaard. British Journal of Dermatology and Syphilis.

Prof. Bruusgaard in this article has given us the first definite proof that certain skin eruption caused by a fungus may be brought about by a haematogenous infection. He cites two instances with conclusive proof. The first a trichophytia infection of the beard, with a papular eruption on the arms and legs. By histological study he proved that the papular eruption on the body was caused by a haematogenous infection carried from the primary infection in the beard. The second case was a generalized fungus infection on the body carried from the primary infection which in this case was a trichophytian infection of the scalp. Heretofore we have considered all trichophytia as local in all its manifestations. Frequently it has been noted that in certain cases of trichophytia profunda with severe symptoms of inflammation are often accompanied by acute exanthemata of varying appearance, but the possibility of their being due to the primary trichophytia has not been considered. The eruptions in these cases often resembles erythema nodosum and it is an entirely new departure from previous knowledge and clinical experience to consider these conditions due to a primary trichophytia. It opens up a new field of thought and practice in skin disease in that it explains the origin of many skin manifestations that we have heretofore failed to understand. He shows further that it is possible to cure many of these conditions by the injection of an extract of trichophyton culture. The reaction from

this form of treatment is often rather severe, but usually brings about a body resistance which cures the disease and gives a certain amount of immunity to the patient against future attacks.

We do not conclude from this article that it is an easy matter to prove in each case that the fungus can be recovered from the secondary lesions, or trichophytides as they are commonly called. Just the opposite is the case. These two cases are the only ones in which the author has been able to prove definitely to be trichophytides from an haematogenous infection from among many cases he has felt certain from the clinical picture were cases of trichophytides. He compared the difficulty one has in recovering the fungus from the trichophytides in cases of trichophytia to the great difficulty experienced in finding the tubercle bacillus in the tuberculides.

Since this is a rather new subject to many, an explanation of certain terms here used is necessary to fully understand the subject under discussion. Trichophytia is a rather loose term applied to a wide variety of skin conditions, due to fungus growth. Under this heading comes what is commonly called ring worm infection, also certain subacute and chronic eczemas which have been shown recently to be due to a fungus infection and classed as trichophytia. Those conditions which are secondary to a primary trichophytia are called trichophytides. Some of the older names applied to these conditions are ground itch, pompholyx, all the tineas which includes a wide variety of infections of both the hairy and non-hairy regions, and eczema marginatum. Since so many of these conditions are fairly prevalent in South Carolina, this subject should be of peculiar interest to all of us.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

ADVANCES IN SURGERY OF THE KIDNEY

The advances that have been made in kidney surgery are no less brilliant than those in other fields of surgery and far more so than in many. Within the past fifteen years, the progress has been most notable. In 1885, Dr. S. D. Gross collected statistics on 450 kidney operations, showing a mortality of from 20 per cent. to 60 per cent. Fifteen years ago, and even now among a very few, the death rate is as high as 25 per cent. In 1912, Dr. Gerster had a mortality of 21 per cent. in 112 cases.

At present, among those who employ modern urological methods, the mortality is from 1 per cent. to 5 per cent., the higher mortality here depending almost entirely upon a type of severe cases of renal infection that must be dealt with. The following statistics will serve to show the very low mortality of today: Caulk reports 263 kidney operations with 5 deaths, 1.9 per cent. Four of these deaths were following operation for severe infections. In 1919, 291 kidney operations were performed at St. Mary's Hospital, Rochester, Minn., with five deaths, 1.6 per cent. During the same year, there were 10,280 operations of various kinds in this hospital, with 1.7 per cent. mortality. Of these, 5,671 were abnormal operations with 2.8 per cent. mortality. It will be seen from this that the mortality rate in kidney surgery is about the same as that of the average operation and less than that in abdominal surgery.

The results from kidney surgery cannot be excelled by those of any other branch, when done on patients who need such op-

eration, at the proper time and in the proper manner.

First of all, a thorough knowledge of renal anatomy, physiology and pathology is essential. These subjects are now very clearly understood in regard to the kidney.

The diagnosis of the renal disease must be made accurately. This can usually be done only by the more advanced urologic methods. By making an accurate diagnosis, it can in this way be ascertained whether a nephrectomy, nephrotomy, a resection of the kidney, or a pelviolithotomy or nephropexy should be done. Furthermore, as a rule, by the employment of such methods we can find out the condition of the other kidney, deciding whether or not any operation should be done. It is very important to catheterize the supposedly healthy kidney and determine its function before attempting operation on the diseased organ. It will be found, too, that many kidneys badly damaged from disease, can be treated through the ureteral catheter and the function thereby becoming markedly improved and sometimes practically restored to normal. In this way, many kidneys will be saved from operation. Frequently, when an operation must be done, the patient's general condition can be benefitted by proper preliminary treatment and usually the patient can be made a good surgical risk out of a bad one.

It is very timely to speak of pre-surgical kidney lesion. A very large percentage of operations that are now being done for renal disease could easily have been avoided if proper treatment had been given and early enough. The average case that comes to operation for surgery of the kidney has had the condition for four and one-half

years, sufficient time with almost any kind of infection to permit marked renal destruction. The most of them were treated only with drugs, either the alkalies or urotropin or alternating these; many also getting useless bladder irrigations, and were not treated by proper urologic procedures. This is especially true in chronic pyelitis, hydronephrosis, stricture of the ureter. Also many unilateral cases of renal tuberculosis, which are usually curable by operation, have become bilateral and hopeless by not making the diagnosis early. In some cases of renal calculus with infection, the kidney may be saved from destruction by timely ureteral catheterizations. A great many of these cases are wrongly treated for a long time usually with drugs alone.

By careful urologic examination, many useless appendectomies could be avoided. 30 per cent of the cases of renal calculi have had previous appendectomy; a great many cases of pyelitis, stricture of the ureter and

other urinary conditions have suffered the same fate. Owing to more careful examinations now being generally made, the number of useless appendectomies are decreasing. It remains, however, for more careful examination of the seminal vesicles to be made to further avoid mistakes in diagnosis of chronic appendicitis. The vesicles have a peritoneal lining and on account of this, abdominal symptoms are not infrequent in seminal vesiculitis.

In summary, the low mortality in renal surgery is now due to the following general considerations: 1. Accurate diagnosis of the kidney lesion; 2. Accurate methods of determining whether or not operation should be done; 3. Improved methods of applying pre-operative treatment. 4. Good judgment in determining the type of operation after it is decided that it should be done, whether it be a nephrectomy, nephrotomy, resection, nephropexy, etc.; 5. Careful examination of the patient as a whole; 6. Proper post-operative treatment.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

THAT SCRAWNY SCHOOL CHILD

We are all called by anxious parents to advise regarding the children of school age who have lost their appetite, become cantankerous in disposition, picayunish in eating, lazy about their life and studies, and who have lost weight and strength, and look pale in color or sallow.

The parents fear that their school duties are too hard or that there is some hidden illness, and seek our help.

Remembering that tuberculosis is the one very common chronic disease of childhood, 75 per cent of all children at ten years of age have been found by numerous observers to react to the skin test, be careful to strip

the child to the waist and go over the chest minutely with the stethoscope, making the child cough and then inspire deeply to bring out the fine moist rales. Also, listen closely for the d'Espine sign of enlarged bronchial glands by getting the child to whisper ninety-nine and listen over the spines of the dorsal vertebra. Normally the amphoric whisper is heard to the seventh cervical spine, when heard to, or below, the third dorsal spine it constitutes d'Espine's sign of enlarged bronchial glands which are usually, though not necessarily tuberculous.

Tuberculosis may lie dormant in these glands, without any lung involvement, for years in childhood, to be activated by any state of congestion such as would be brought

about by measles, grip, or whooping cough.

If d'Espine's sign is present, or any rales are elicited, have the von Pirquet skin test made and, if this is present, have made an X-Ray of the chest to determine the diagnosis and extent of the disease.

Examine the teeth and tonsils, and the glands under the jaws, for focal infection and correct same if found, also make sure that the urine shows neither albumin, sugar nor pus, and that there are no ova of intestinal parasites in the stool.

Having excluded, or corrected these think next of that very common and distinct entity at this age, namely malnutrition brought on by faulty dietetic regime. Here you will elicit, upon inquiry, a history of eating between meals, all sorts of fancy, nice tasting foods, especially sweets such as cakes, candy chewing gum, ice cream, fruits, nuts, syrups, jams, crackers and biscuits, etc.

What is one child's sweet is another child's poison. Some children simply cannot stand sweets, and almost any child who starts nibbling sweets soon acquires a craving. A little sweet taken an hour before meal time checks appetite and in a short time they will lose all desire for the plain, tasteless cereals, vegetables and meats, and eat sparingly at meals with the result that shortly after meal time they get up a slight hunger and satisfy it with a little sweet.

Before long their disposition changes and they become cross and nervous; they tire easily; their appetite fails and they rest badly at night to waken tired out and with dark circles under their eyes, and a sallow or muddy complexion. Their mother gets worried and tries to tempt their appetite with dainties and sweets and the condition gets steadily worse and they begin to lose weight and strength. Mother now

begins to plead and beg, and even bribe, them to eat until they become thoroughly spoiled and cross and unfit to live with, and finally, through malnutrition and lowered resistance, they go down with some sickness, probably a sore throat or severe coryza.

Such is the picture familiar to all doctors and most parents.

Providing the hearty and real co-operation of the parents can be obtained there is an almost absolute and sure way of quickly overcoming the trouble, and no medicine is needed or desired. Explain clearly to the parents, and the father must promise to do his part, and get their consent to co-operate for one week. Then order all feeding and nibbling between meals of whatever kind to be stopped, especially all sweets of every description. See that the child comes to table at regular meal hours, and have the ordinary meals prepared. Let the child alone, and don't beg, nag or bribe her to eat anything, but do not give anything between meal hours, make her wait until the next regular meal and then repeat the process and appear absolutely indifferent as to whether or not she eats, let her severely alone.

Her acquired stubbornness may hold out for three days, but by then, and usually on the second day, she gives in and lets her natural appetite overcome her pride and the battle is off. Very soon a hearty, appetite for sensible, hunger satisfying foods, that the parents and everyone else is eating, returns and from now on it is simply a question of not pandering a child's sweet tooth. All symptoms rapidly disappear, the natural strength and color return and the natural sweetness of disposition, inherent to the healthy child, makes her once more the pet of the family and neighbors, and of the school teacher.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

OSTEOMYELITIS

Clarence L. Starr of Toronto, Canada, writes interestingly of acute early osteomyelitis in the Archives of Surgery, May 1922.

He states that acute osteomyelitis is practically always a blood borne infection. That frequently a severe strain or a direct blow causes an extravasation of blood into underlying tissues and that this diseased area offer hospitable reception to micro-organisms coursing through the blood. These micro-organisms may be in the blood as a result of previous sore throat, a discharging ear, a suppurating ingrowing nail, furuncles in the skin, or what not.

Osteomyelitis is essentially an inflammation of all the structures of the bone, including the periosteum.

It is primarily a disease of children. This is due to the fact that growing bone is less resistant and that the epiphysis has not yet become an integral part of the bone itself.

Starr takes issue with the time honored conception of invasion and spread from the initial point of infection. Commonly, heretofore, it has been thought that the infection spread through the cancellous bone direct into the medullary cavity. He believes and apparently proves by Roentgenology as well as by microscopic study that the infection spreads from the cancellous bone along the epiphysis to the periosteum; where pus forms. The pus then extends upwards or downwards as the case may be, beneath the periosteum stripping it from the bone then inwards, by way of the Haversian canals to the medullary cavity.

Microscopically, he found quantities of the causative organism and Mononuclear and giant cells, indicative of inflammatory

reaction, in the cancellous portion of the bone close to the epiphysis, as well as in the adjacent periosteum, but close scrutiny of the contents of the medullary canal failed to reveal any organisms or inflammatory reaction whatsoever. Similar studies made at a later stage did show micro-organisms and inflammatory changes in the canal contents.

Cultures made from the cancellous tissue and adjacent periosteum also showed a growth long before the ones made from the medullary canal.

Likewise, X-Ray interpretations furnished similar conclusions, as the periosteum was definitely thickened and detached and bony changes were more marked on the periosteal side, for a greater distance up or down the bone, than in the medullary area.

Starr, very properly insists that the X-ray is of no value in establishing the diagnosis early.

Early diagnosis is to be made by the history of the case, as well as by signs and symptoms. The leukocyte count is unusually high, often 25,000 to 30,000. The diagnosis being made early, an incision over the point of greatest tenderness through the soft parts, and down through the periosteum to the bone itself should be made.

If no pus is here found, the periosteum should be stripped for a distance of one to two inches from the underlying bone to be sure that a pocket has not been overlooked.

If pus is found beneath the periosteum, he states that it is only necessary to institute a drain and that recovery will be complete in from three to four weeks.

If no frank pus be found, he drills three holes, one above the other, obliquely down into the middle of the cancellous bone from

the cortex, being careful not to injure the epiphysis it self or the periosteum between it and the end of the bony shaft. Within twenty four hours, a line of least resistance, being formed, pus will be pouring freely, and within three weeks the lesion will be healed. Cultures made from the debris removed from these drill holes always show pyogenic micro-organisms.

He insists that trephining an opening into the medullary canal of 2 1-2 or more inches

is pernicious practice, when performed at this stage of the process.

In the later stages, he establishes free drainage, and then waits until the sequestrum is separated. He then chisels through the involucrum, lightly cures the cavity, sponges it with iodine, packs it for 48 hours, with iodoform gauze, after which all packing and drains are removed. The dressings are changed from time to time until the lesion has healed.

ROENTGENOLOGY

FLOYD D. RODGERS, M. D., Columbia, S. C.

X-RAY EXAMINATION OF MASTOIDS.

The mastoid has come in for a considerable amount of study in the last ten years and the X-Ray has played a very important part in these investigations. In former times very many mastoids were considered normal because of a lack of classical signs—tenderness, swelling and temperature—which are now diagnosed as pathological and operated upon. The clinician, given a history of repeated otitis media, discharging, ear, a low leucocytosis, and a well-made X-Ray plate, can determine very definitely whether or not the mastoid is involved.

Then if the mastoid is to be operated upon, the X-Ray plate is invaluable because of the anatomy it reveals. No two persons have the same distribution or arrangement of mastoid cells, and the cells even differ on the two sides in the same individual. and if, after operation, there is any doubt in

the surgeon's mind as to the possibility of having overlooked one or more rather large cells, this question can be easily answered by an X-Ray of the mastoid region.

The roentgenologist can answer very accurately the following questions: position of the lateral sinus, the size and shape of the mastoid; whether the mastoid is completely sclerosed, or whether the sclerosis is evident only about the canal with open cells posteriorly; whether one mastoid is sclerosed and the other normal; the amount of destruction of cellular structure; and in acute conditions, whether or not the mastoid is hyperaemic.

The responsibility for asserting whether or not a mastoid is operative should not rest on the Roentgenologist, but should be decided by the clinician when he has correlated the clinical and laboratory findings in the patient. And certainly the X-Ray examination of the mastoid is more valuable than any other one single process when the mastoid is suspected.

PUBLIC HEALTH

LEON BANOV, M. D.,
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MORE COUNTY HEALTH DEPARTMENTS NEEDED IN SOUTH CAROLINA.

If a complete sanitary survey of South Carolina could be made, a number of starting conditions would be demonstrated.

The first and outstanding fact that would evidence itself to the observer would be that the advancing civilization of which we are so wont to boast, has affected the different portions of our State in varying degrees; and that while a large percentage of our people are living in the twentieth century, there are still a great many today that have not advanced very much beyond the eighteenth or the nineteenth centuries—while a few may be found that would fit in very well with our conception of semi-barbarians and pre-civilization days.

It requires very little argument, in the light of our present knowledge, to convince one that decency as well as physical safety demand that human excretions must be so disposed of, that they will not pollute the food we eat or the water we drink.

The fact remains however, that more than fifty per cent of those that dwell in the rural districts of our State are so careless in their personal habits, that they do not provide themselves with even the crudest type of a privy; and are satisfied to void their discharges wherever they may happen to be when Nature calls—irrespective of their proximity to their home or the homes of others.

It is not surprising that a physical examination of the average person living under such unsanitary conditions, will reveal infection with uncinaria, taenia and other in-

testinal parasites—in fact the only reason, as far as we can see, that he has not succumbed to typhoid fever or some other intestinal disease, is that by frequent ingestion of human discharges through a number of years, he has developed an immunity of greater or less degree against this type of diseases.

It is mainly on account of this phase of rural life that the natural order of conditions have been reversed; and it is far healthier nowadays in the overcrowded and congested city than in the average rural district—with its fresh air, sunshine and all of the other natural health factors in its favor.

The fact that while the morbidity and mortality rates of organized municipalities have been steadily decreasing year by year, while the rural districts have maintained consistently high death and sickness rates, have directed the attention of sanitarians to the possibilities of rural sanitation; and great strides in that direction have been made throughout the United States during the past ten years.

While heretofore the Health Department has been organized with a view to protecting the city and the organized town, the County Health Department is now coming into its own, and the fact that more than three hundred full time Health Departments have been created during the past few years, with the County as its unit of population, demonstrates the need for such a work.

The sanitary problems of the City and the Rural districts are indential; only the methods of solving them differ.

The organized City has a decided advantage over the isolated home in constructing sanitary work. The laying of public sewers

and common water pipes can be laid down by a municipality at a comparatively low cost to the individual; and in the construction of this work the highest type of skilled engineers may be employed.

The isolated home, on the other hand, must work out its own sanitary problems—and the manner in which these matters have been met by the average individual has resulted in very little that could be called satisfactory.

The County Health Department has been developed in response to this need for expert advice regarding sanitary problems, and its work in the Counties where this organization has been created has demonstrated the fact that it is just as practical to completely sanitize the isolated rural home as it is the house constructed in the heart of a city.

The immediate results following the creation of a County Health Department, are the installation of safe sanitary types of excreta disposal to replace the old fashioned unsanitary open-back privy or the "privy bush" of the more primitive home.

By a safe and sanitary method is meant any system that prevents soil and water pollution, and protects the discharges against the access of flies; and the fact that this is practical to accomplish in the isolated home is attested to by the fact that the average County Health Department is able to sanitize between five and ten per cent of its population in the first one or two years of its existence.

The type of privy recommended vary from the simple earth pit—which consists

primarily of a pit in the ground, over which has been installed a fly proof building, with a seat equipped with closing seat cover to the septic tank—which is really a private sewerage system and which reduces the discharges by means of bacterial action.

Each type is designed to meet a special condition, and a system that will work satisfactorily in one locality will not necessarily function properly in another.

A knowledge of these various methods of excreta disposal is therefore necessary to the proper administration of a County Health Department.

While it is gratifying to know that there are at least seven full time County Health Departments in South Carolina—each in charge of a Health Officer who has made a special study of rural sanitary problems—we must realize that this work has just barely been commenced in this State.

The time will come—let us hope real soon—when South Carolina will follow in the footsteps of her more progressive sister States, and organize a full time County Health unit in each and every County.

Then—and not until then—will we see a lessening of diseases in the rural districts, and a growing prosperity as a result of this diminution of disease.

Then, will the hookworm cease to wield its devitalizing power the citizenry of our State, and the sand colored, clay-eating creature in human form that people in our rural districts today, will be replaced by hale healthy and happy individuals capable of meeting life's burdens and responsibilities.

NERVOUS AND MENTAL DISEASES

B. O. WHITTEN, M. D.
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"SENILE PSYCHOSIS"

A psychosis occurring usually after the age of 60, due to arterial or tissue changes, presenting a variety of symptoms, and progressing to a fatal termination. A few cases may occur earlier in life and are sometimes called pre-senile psychoses. Involution changes, which are the results of tissue degeneration, show a tendency in certain families. Alcoholism has been considered an important factor.

The difference in the intensity of symptoms is marked enough to dove-tail into the ordinary childishness of aged individuals, and to present at the other extreme, a syndrome that may be observed at first sight. A fairly long prodromal period is the rule. During this, complaints may be numerous. Peculiar sensations, vertigo, irritability and moroseness are in evidence. These symptoms are usually followed by delusions, often of a persecutory character. The patients are easily angered and may show uncontrollable outbreaks. Orientation may be good, and they are usually conscious. One of the most striking symptoms of senile dementia is a loss of memory for recent events. They usually are able to recall occurrences of long standing, but remember practically nothing that is recent. This seems to be due to lack of impressibility. Failure to recognize familiar faces is common. Reminiscences occupy a lot of the patients time. Ideas of infidelity toward the husband or wife, as the case may be, apt to be shown. This condition may pass on into a state of confusion which causes the patient to become restless and wander about aimlessly, often at night. Fabrications, often used to supply the deficiencies in memory, are frequently noticeable.

Some of these may be noted for the utter absurdity of their nature. During such periods the patients are generally resistive and irritable and beyond all hope of reason. In this condition it is wise to guard against some form of violence by the individual, and attempts at suicide should not be overlooked. They frequently are troubled with headache, and while hallucinations are not especially characteristic, the patient may suffer from marked auditory hallucinations, and possible visual type also. They are often extremely suspicious, and may cause the examiner to suspect a Paranoid condition or a dementia precox.

A few mental diseases may at times cause difficulty in arriving at a proper diagnosis. Manic-Depressive insanity may occur at this age, but unless history reveals one or more previous attacks it is fairly safe to assume that one is not dealing with a manic.

General paralysis may present symptoms very much like this disease. The difference in the ages of a paralytic and a senile will give a lead, and laboratory findings should remove the doubt.

The physical signs of an artero-sclerotic dementia are quite difficult to separate from a senile. All cases suffering from senile dementia will show a marked involvement of the cardio-vascular and renal organs, and it would probably be just as accurate to classify these two diseases under one heading.

The physical differences will usually serve to differentiate senile psychosis from paranoid conditions.

Proper respect for the philosophical dictum that, "A man is as old as his blood-vessels" is very applicable in this disease, and never fails to be well verified when handling such cases.

The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councillors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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EDITORIAL

"THE BOSTON MEETING OF THE AMERICAN COLLEGE OF SURGEONS"

The twelfth annual meeting of the Clinical Congress of the American College of Surgeons was held in Boston October 23-27, 1922. There were about twenty-five hundred fellows of the College in attendance. Some of the notable visitors at the meeting were:

Raffaele Bostianelli, M. D.; F. R. C. S., (Hon.) of Rome.

Francis Seymore Kidd, M. C. L.; F. R. C. S., of London.

Andrew Fullerton, C. B. C.; M. G., of Belfast.

Einar Key, M. D., of Stockholm.

On Monday, an attractive hospital con-

ference was carried out. This was largely attended and it was very evident that the fellows of the College appreciated the constructive work among hospitals which the College has been doing the past few years. At this time the revised list of hospitals in the United States and Canada which measure up to the "minimum" standard was given out. This year the College published results of its work among fifty to one hundred bed hospitals. It was gratifying to learn that the percentage of approved hospitals in this group was much greater than was the percentage of approved hospitals in the over one hundred bed group a few years ago when the work was begun. In our state, Baker Sanatorium, St. Francis Hospital, and * Anderson County Hospitals were on the approved list of 50 to 100 bed hospitals. Besides

these, the following hospitals of over 100 beds had already been approved:

Roper Hospital,
 Florence Infirmary,
 *Columbia Hospital,
 *Greenville City Hospital.

(Those marked with * were, when visited by the representative of the College, judged as having assembled the necessary machinery but as not then functioning perfectly in high gear.)

Some interesting facts were brought out in this conference. Rev. Charles B. Moulmier, S. J., president of the Catholic Hospital Association made the statement that the result of adopting the minimum standard in Catholic Hospitals had been to decrease the ratio of operations to admissions.

Dr. A. R. Warren, Secretary of the American Hospital Association read an interesting paper along the legal phase of hospital work. He quoted several court decisions to the effect that since a hospital is held legally accountable for the work of its agents (especially its nurses and doctors) it followed that nurses or doctors who were unethical or who refused to conform to hospital requirements in the matter of case histories or other procedure, could and should, from the standpoint of self-protection, be excluded from practicing in the hospital.

Other speakers brought out the fact that standardization was for the benefit of the patient in that it encouraged more accurate diagnosis and a sane conservatism in treatment. It was for the benefit of the staff in that open study of diagnosis, treatment and results was part of the minimum standard program. It was for the benefit of the hospital from a community standpoint in that the average community took just pride in an institution whose entire personnel was co-operating in a serious and enthusiastic way, in improving the service it was rendering the community.

The daily clinics were pronounced by the older members as being up to the standard in work and in variety. Some of the most sought after seats were at Peter Bent Brigham Hospital, Mass., General, Boston City, Harvard Medical, and Childrens Hospital. The doctors and hospital officials were uniformly courteous.

The clinics that a few of the fellows enjoyed to the fullest were the Harvard-Centre Clinic at the Stadium and the Yale-Army Clinic in the Yale Bowl. After we have forgotten how Cushing removed a cerebellar tumor, and what Porter said at his thyroid clinic, we will remember how that army mule romped down the field and kicked its way to a touch down.

On Friday night the degree of Honorary Fellowship was conferred upon most of the distinguished surgeons from foreign countries. The large class of over seven hundred candidates upon whom fellowship was conferred this year, included surgeons from Canada, Cuba, Mexico, South America as well as from the United States. The surgeons in this state who this year received their fellowship were:

R. E. Houston, Greenville.
 C. H. Fair, Greenville.
 S. O. Black, Spartanburg.
 R. E. Abell, Chester.
 C. B. Epps, Sumter.
 S. E. Harmon, Columbia.
 D. L. McGuire, Charleston.
 H. W. DeSaussure, Charleston.
 J. R. Young, Anderson.

The fellowship address delivered in English by Raffaele Bostianelli, M. D., F. R. C. S., (Hon.), of Rome, was of high order. The note of altruism that was struck by this distinguished surgeon was inspiring.

The Presidential address by Dr. Harvey Cushing was masterful both in structure and subject matter. From the startling quotation from La France (uttered some two hundred years before Guttenberg invented

the printing press) with which quotation the address both opened and closed, he selected a theme, which, though ancient, is yet modern. It was a plea for all-roundness in the surgeon, a plea that he be a

diagnostician as well as a surgical therapist, that he be a real surgeon and not a mere operator.

J. R. Young.

ORIGINAL ARTICLES

AORTIC INSUFFICIENCY

Thesis by J. F. Woods, Member of the Graduating Class 1922, Medical College of the State of South Carolina, Charleston, S. C.

(Concluded)
Treatment.

The treatment of aortic regurgitation depends upon the stage in which the disease is first found, and roughly the disease may be reckoned as occurring in two stages: (1) The stage of compensation (2) Stage of broken compensation.

During the stage of compensation when the left ventricle is performing its work without the production of symptoms no treatment is indicated except to aid nature in every possible way by the avoidance of every agency that tends to aggravate or maintain the lesion, as overstrain, fatigue, exposure, and excessive muscular activity. This may call for a change in the patient's vocation. The patient's response or reaction to a measured amount of work or exercise is to be determined and his activities regulated accordingly. This reaction can be estimated by the amount of dilatation and hypertrophy of the heart, by the changes in blood pressure etc., and by the measurement of the vital capacity of the lungs. Dr. Peabody claims that the measurement of the vital capacity of the lungs is a direct way of measuring the ability of the patient

to withstand exercise, and recommends it strongly. Not only the muscles but the mind also should not be overworked. Emotional excitement should be avoided especially if the second stage of angina pectoris has developed. The diet of the patient demands careful regulation. Overeating, alcohol, tea and tobacco should be avoided. The diet should consist of the most easily digested foods. Liquids should not be taken in excess of the actual requirements as overfilling of the blood vessels increases the amount of cardiac work. The bowels should be kept open, there being at least one movement a day. The saline purges are best for this when necessary, but usually the use of stewed fruit and the carbohydrates accomplish this. Hygienic living in every way must be carried out as far as the circumstances of the individual patient will permit, and these circumstances must be remedied if possible when they are detrimental. The majority of the patients come from those who must work daily for the necessities of life, and rigid adherence to hygienic living and proper treatment is impossible. Such cases are simply unfortunate, in them we must approach the ideal treatment as far as possible.

In cases of arterio-sclerosis, potassium iodide—gr V, or sodium nitrite gr. III, three times a day, is advisable to help check the progress of the sclerosis, to keep down the blood pressure, and diminish the peripheral resistance.

The stage of decompensation is ushered

in by dilatation of the left ventricle without corresponding hypertrophy and is the stage when symptoms appear, mild at first but generally rapidly increasing in severity. The important factors producing dilatation are diminution of tone and increase in peripheral resistance. The treatment in this stage then should be directed towards counteracting these conditions. Complete rest in bed must be insisted upon until the symptoms abate.

To increase the cardiac tone digitalis is used. It has been contended by some that this drug is contra-indicated in aortic insufficiency, because by prolonging ventricular diastole it favors increased regurgitation. Dr. Stewart showed that the lengthening of diastole was not harmful if there was no diminution in ventricular tone, since the pressures in the aorta and ventricle are equal as soon as the latter is filled. For the same reason the slowing of the pulse is not harmful. Romberg showed that the lengthening of diastole was not as great in aortic as in mitral insufficiency. The harmful effect of digitalis is due to its action on the peripheral arterioles. Upon these it has a powerful constricting effect, and thus by raising diastolic pressure is its effect deleterious.

Theoretically strophanthus should be a more useful drug in aortic regurgitation, since, as shown by Fraser, it does not possess this constricting quality to the same degree as digitalis. Some vasodilator should be given with digitalis to counteract its constricting action. For this effect nothing is better than the nitrites which, besides acting as vasodilators, also increase cardiac tone. Better still combine them with strophanthus. Digitalis does not increase the absolute power of the heart but only enables it to use that which it is already possessed of to greater advantage. Cloetta claims that if digitalis is given as soon as the valve lesion is produced both hypertrophy and dilatation of the aorta is greatly retarded and hence the course of disease. He has proved this by a series of experiments upon

rabbits with digitalis administered both to rabbits with normal hearts and to others in which aortic regurgitation had been produced, and comparing the hearts to the hearts of rabbits that had not been treated with digitalis, but that had had aortic regurgitation produced. Long continued administration of small doses of digitalis may exert a beneficial effect without producing the harmful effects sometimes met with, such as heart block. The dosage of digitalis is reckoned by the degree of cardiac embarrassment. In the latter stages of the disease when the heart is labouring heavily, rather large doses of the drug may be given. The tincture is probably the best preparation to give.

The individual symptoms frequently demand special treatment. The dyspnoea when caused by pulmonary stasis is relieved by the cardiac stimulants. Orthopnoea is usually associated with dyspnoea. A head rest is very comforting. For the attacks of nocturnal dyspnoea morphine given hypodermically is the one drug that will afford relief, and is entirely free from the usual objections to the habitual use of the drug. It is also of aid in securing relief from the cough which is almost always present and due to pulmonary stasis also.

For the anginoid pains local applications such as the ice-bag, the hot water bottle, or a blister of some sort may be tried. When due to arterio-sclerosis the nitrites are useful, these failing, administer morphine.

Insomnia and restlessness are quite common symptoms of the late stage of aortic insufficiency and must be combatted to secure much needed rest for the patient. Bromides, veronal, trional, paraldehyde and mild somnifacients may be tried, but in the later stages where cardiac palpitation, hideous dreams and intense headache are added to the restlessness then morphine is to be given. One well-known authority has said that morphine was of more value in late stages of heart disease than is any other drug,

digitalis included. It secures rest, the one thing needed by the whole body especially the heart.

For the oedema of the feet and legs—general anasarca being uncommon—free purgation and the use of diuretics is indicated unless an examination of the urine shows that the kidneys are damaged or their function is low. Diaphoretics may be tried if the kidneys are diseased. The oedema is the result of stasis and is to be overcome by cardiac stimulants. The use of hydragogue purges and diuretics is only to assist in removing the excess fluids. Salines and elaterium, with podophyllin and belladonna, are agents that are highly recommended as purgatives. A course of calomel followed by salines until free catharsis is set up, is valuable from time to time. Mercury is especially applicable when the liver is much enlarged and ascites is present or there is a history of syphilis or a positive Wassermann. Lately the Karell diet as an aid to removing the fluid has come into prominence. It consists of a strict milk diet of from 800 to 1000 c. c. of milk per day, in four doses at four hour intervals for a varying period of from one to six days. Then an egg is added for the next two days and also a slice of toast. The diet is then gradually increased. In the cases of aortic regurgitation occurring lately in Roper Hospital that had oedema, this form of diet has been extensively used and has given beneficial results.

When efforts of relieving the oedema or dropsy by means of medicinal treatment fail, then the most dependent parts of the body, or those most swollen, should be scarified under strict aseptic precautions. Fine silver trocars with rubber tubes attached may be inserted and the fluid allowed to drain off gradually. If there is marked ascites then the abdomen should be tapped and a part or all of the fluid removed.

When the right heart is overdistended, as shown by its feeble contractions, and the

whole venous system is intensely engorged, as shown by cyanosis and orthopnea, bleeding directly from a vein is indicated. As much as twenty ounces can be withdrawn in safety and the hearts action will almost immediately be observed to grow stronger. This is also useful in the arterio-sclerotic form when the blood pressure is high. In such cases the results have proved excellent.

When decompensation has once fully developed it is seldom that the re-establishment of compensation is possible. In the beginning of decompensation by rest in bed, the use of digitalis and symptomatic treatment a fair degree of recovery is obtained in most cases. Should recovery occur then rigid after treatment must be kept up for at least a year. The after-treatment is practically the same as before compensation failed, only the same liberties cannot be allowed, exercise must be curtailed to the minimum and strict dietary rules observed. Should the faintest evidence of a return of decompensation manifest itself then the patient must be put to bed and vigorous treatment instituted. The use of digitalis in small doses and the administration of tonics in the periods of abatement of symptoms do much to maintain compensation. In the latter stages of broken compensation besides what has been said there is nothing to do but make the patient as comfortable as possible and await the inevitable end.

Nothing has been said of the treatment of associated diseases. These are to be treated also according to the treatment the individual disease indicates. In regard to associated lesions of the heart the treatment as a rule is the same in relative mitral insufficiency.

If the case is seen early and the cause determined then an attempt is made to remove it. For instance, if syphilis is thought to be the cause, anti-syphilitic treatment is prosecuted; if arterio-sclerosis then treat that disease; if rheumatism is the cause look

for foci of infection and remove them.

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THE SURGICAL ANATOMY OF THE TEMPORAL BONE

By *M. R. Mobley, M. D., Florence, S. C.*

A knowledge of the anatomic details of the temporal bone is absolutely essential to the Aurist who would perform the various operations incident to ear infections. In this bone there are a number of important anatomic structures which encroach upon the field of operation; and so the first problem of the Aurist is to master the anatomy of this region. This information cannot be gained from text-books, nor is it readily obtained by operations upon the cadaver.

Read before the South Carolina Medical Association, Rock Hill, S. C., April 19, 1922.

Personally, I have found that the best method of study is by sectioning and operating on the dry, disarticulated bone, under the supervision of one skilled in these anatomic details. In Eddie Burchell, Pathologist to the New York Eye and Ear Infirmary, we have a master. Every student of his owes him an everlasting debt of gratitude for his interest and painstaking care. It is to him that we are indebted for these valuable slides.

The temporal bone in the new born presents an appearance quite unlike that seen in the adult, assuming the characteristics of the adult bone at approximately the fourth year of life. In the infant's bone there is a complete absence of the bony external auditory canal, the membranous canal being attached directly to the tympanic ring, explaining the cause of pain in an acute otitis media when the auricle is manipulated. The drum membrane approaches more nearly the horizontal position, being almost in the same plane with the superior canal wall, thus explaining the necessity, in an infant, for making traction downward on the lobe of the ear in order to separate the canal walls and obtain a view of the drum membrane. There is an absence of the mastoid process in the infant, and frequently through the persistence of the petro-squamosal suture, a subperiosteal abscess can be rapidly formed as this suture communicates directly with the antrum. Thus a simple Wild's incision in an infant is effective in clearing up an antrum infection, as there are no pneumatic cells developed at this age. The mastoid antrum, however, is pneumatic at birth. The stylomastoid foramen is on the outer surface of the bone in the infant, and the facial nerve is in danger of being severed in making the incision for the relief of a subperiosteal abscess.

The landmarks on the outer surface of the adult bone which serve as a guide in opening the antrum are the linea temporalis and the spina suprameatum of spine of

Henle; the former indicating, in a general way, the line of separation between the middle cranial fossa and the mastoid antrum. The antrum lies behind the upper posterior wall of the bony external auditory canal. This can be demonstrated by boring a hole through this portion of the canal wall into the antrum. A periostitis with bulging or flattening of this portion of the canal wall in an acute ear infection is quite significant of mastoid involvement. The classical point for making this opening is just below the linea temporalis, and just posterior to the spine of Henle, following the direction of the posterior canal wall.

The process of pneumatization of the mastoid bone is often incomplete, so that few cells are developed, and these close to the antrum, or cases may occur where no cells exist. It is usually this type of diploic bone that is found in cases of chronic suppurative otitis media dating from early childhood.

The lateral sinus encroaches upon the air cells from within. In pneumatic bones the sigmoid curve is usually deep in and sufficiently separated from the posterior wall of the external auditory canal to allow for an easy approach to the antrum. However, in the infantile or diploic type of bone the sinus is usually far forward and sometimes quite superficial. In such cases the approach to the antrum must be made by working along the upper posterior wall of the canal, just under the line a temporalis.

The horizontal semicircular canal forms a prominence on the floor of the antrum, recognized by its ivory like, glistening appearance. The facial nerve lies between this canal and the oval window, being protected in this position by the former. From this point the nerve drops in a horizontal direction, to emerge at the stylo-mastoid foramen. The horizontal semicircular canal marks the level of the depth of the nerve.

Lying on the inner wall of the tympanum, just above the tympanic orifice of the eus-

tachian tube is the processus cochleariformis, or canal for the tensor tympani muscle. The facial nerve lies in a very delicate covering of bone just above this process; and in doing the radical operation the nerve is in great danger of being injured by attempts to remove the muscle and cochleariform process.

Pneumatic cells may develop in close proximity to the nerve, and in the pneumatic type of bone may lie deeper, or internal to the nerve. Here it is essential, in curetting, to hug the sinus plate, and not curette up and out against the facial ridge. In this same type of bone the digastric ridge will be clearly demonstrated by the removal of cells. This ridge is continuous above the facial ridge, and caution should be exercised in removing cells in this neighborhood as the posterior wall of the external canal is approached.

The jugular bulb is sometimes in very close relationship with the floor of the tympanum, and in cases where there is a dehiscence in the floor, infection may enter the bulb in an acute otitis, and produce a thrombus, without necessarily having mastoid symptoms. Cases also have been reported where the bulb has been injured in doing a paracentesis.

The internal carotid lies directly in front of the tympanum, below or internal to the eustachian tube, and in curetting this tube in the radical operation the pressure of the curette must be directed upwards or outwards and not mesially.

Another source of trouble in the pneumatic type of bone is that cells frequently extend into the petrous pyramid; thus permitting an infection to penetrate deeply into this structure. In this type of case one occasionally sees a sixth nerve paralysis, due to a localized bazilar meningitis in which this nerve is involved as it courses over the apex of the pyramid. This condition has been termed Gradenigo's Syndrome, and is characterized by paralysis of the sixth nerve,

with resulting internal strabismus, an acute middle ear infection and neuralgia of the trigeminal nerve.

In doing the Hinsberg operation for the relief of a labyrinthitis one should exercise great care not to expose the second turn of the cochlea, for in so doing you expose the central medeolus with the danger of the developement of a subsequent meningitis.

Discussion:

Dr. W. F. R. Phillips, Charleston:

I wish to thank Dr. Mobley for presenting this subject to us, because the temporal bone is one of the most difficult bones of the body to understand, to visualize. It holds within it one of the most important organs in the body, the organ of audition—not the organ of hearing only, but also the organ of equilibration. The connection of the vagus nerve with it is only explainable by the connection of the organs within the bone with the lower side line sensory systems of the amphibians and the fishes. It is generally accepted, I think, that the peculiar system of side line sensory organs of the fish and the amphibian, to which the vagus nerve is in part distributed, are represented more or less in the organs of the ear of the higher animals, hence the connection noticed.

Dr. Mobley, closing the discussion:

I might say in closing that the paralysis of the sixth nerve to which I referred is not an operative injury, but an involvement of the nerve due to a localized basilar meningitis in the area of the apex of the petrous pyramid, the nerve in its course passing over the apex of the pyramid.

FAULTY FOOD IN RELATION TO INTESTINAL STASIS AND AUTO-INTOXICATION

By *Sophia Brunson, M. D., Sumter, S. C.*

When our ancestors lived in a primitive state, constipation with its attendant evils was unknown. They ate their foods as nature had prepared them. The milling and culinary arts, or the processes of taking the delicious products so abundantly provided for our sustenance by a beneficent Creator and denaturing and devitalizing them by improper milling and cooking processes, were not so well understood and practiced then as now. Their bodies were not poisoned by tobacco, tea, coffee, spices and condiments, together with laxative drugs and patent medicines, all of which impose extra burdens upon the depurating organs, eventually tending to wear them out prematurely. Modern civilization therefore with its abnormal habits of living, is largely responsible for constipation and its long train of evils.

Constipation is one of the most common and far reaching ills to which flesh is heir. For a number of years I have made it a rule to inquire very closely into the defecating habits of patients. When asked, "Are you constipated?" the answer is almost invariably, "No, I take medicine for it." That means that they seldom have a bowel movement unless they take drugs. The tongues of such patients are usually coated, the breath foul, the skin muddy and the whole appearance indicates a state of toxemia or intestinal stasis and putrefaction. *Our modern habits are responsible for this condition.* Among them may be mentioned insufficient bulk in the intestines, too much polished rice, meat and white bread, which not only does not leave sufficient residue in the intestines, but does not nourish properly. Plenty of fresh fruits and vegetables are necessary to stimulate the bowels to

Read before the South Carolina Medical Association, Rock Hill, S. C., April 19, 1922.

activity. The farmer gives his mules and horses fodder and hay, and his cattle "silo," which furnishes bulk; but when his children are bilious, as he calls it, from improper feeding, he gives them a pill. He has healthy stock because he knows how to feed them, for he takes the trouble to study and put into practice the information contained in Government bulletins on the subject; but his children suffer because their mother's knowledge is more limited in regard to their welfare. We need cellulose just as the horse needs hay. He will eat his stable if he does not get it. In the milling processes most of the cellulose and valuable vital elements are removed from our flour and cereals. Carrots, turnips, lettuce, and other vegetables contain cellulose which cannot be digested, but it is very necessary in furnishing bulk which helps the intestines move the contents along the twenty feet or more of length. Nearly all fruits and vegetables, especially the tomato, contain organic acids, citric, malic, and tartaric. The laxative effect of these acids is very marked. A diet of white flour and polished rice, together with meat, form a combination that is productive of immense harm. It also deprives the bowels of lime salts. Hence so many defective teeth in children, and their early loss in adults. In Russia and Germany the peasants keep the bowels open by the free use of saur kraut. Even the Esquimaux, in order to prevent constipation, eat the moss which they obtain from the reindeer's stomach. Formerly every negro family in the South had his patch of greens, and his unbolted corn bread with which to keep himself and his family in a state of health. Today he is too shiftless and ignorant to have a garden, consequently he often suffers (even in this country) from scurvy, constipation and its attendant ills.

Cooking food increases its digestibility, but experience has shown even in infants, that a diet consisting wholly of cooked foods is detrimental. Children who are

largely fed on sterilized milk often suffer from malnutrition. Sailors develop scurvy from the lack of enzymes and vitamins found in raw food.

Constipation is sometimes caused by too little food. The peristaltic waves which move the bulk along the intestines, are set up by the reflex action excited by the food.

Pickles, mustard, pepper, and a whole list of condiments have no food value. They produce irritation, catarrh and lead to gastritis and eventually injure the colon. Constipation and Haemorrhoids are very general in countries where these things are excessively used. Anything that lowers the vitality has a tendency to cause constipation; even insufficient sleep. But I see that I must hurry on. I can only briefly mention wrong habits of dress, incorrect sitting and standing positions, deficient exercise, and last but not least the practice of resisting the call of nature to defecate. Of course, there are many cases of intestinal stasis that are caused from kinks, prolapse of the colon, bands, chronic appendicitis, and obstructions of various sorts, including ptosis of the abdominal viscera. But nearly all of them had their inception from wrong methods of living, which included constipation and its train of attendant evils. According to Dr. J. H. Kellogg of the Battle Creek Sanitarium, and Dr. Shelton Horsley of Richmond, all of these cases should be treated by an intelligent medical man at least several months before recourse is had to surgery. Many cases will be relieved without the use of the knife. If operation only is resorted to then often the last state of that man is worse than the first. Bouchard, a famous French physician, was the one who coined the word auto-intoxication, and to enumerate the causes. By his experiments he established the fact that the intestines and especially the colon is a most prolific source of poisons. Bouchard proved that the bile is six times as poisonous as the urine, producing within ten hours enough

poison to cause death. The mucous membrane of the intestines separates from the blood most potent poisons and throws them into the cavity of the intestines to be removed from the body. The protein of the food which is not absorbed but remains in the intestines, can, and often does, become a virulent poison. When the bile, the toxins from the blood, the unabsorbed proteids, etc. remain in the intestines too long, the whole mass undergoes putrefaction which results in the growth of noxious bacteria, that are capable of producing virulent poisons. Pasteur showed that the putrefactive process is the result of the growth of certain bacteria. In most cases of intestinal stasis these bacteria swarm in the intestines, particularly the colon. The same bacteria are found in the flesh of dead and decaying animals. You know that they are numerous in commercial milk, in the dust of the streets, in fact everywhere. You can readily see that any residue of food in the intestines which is capable of putrefaction are infested with these bacteria. Then add to the food the toxic bile and other constituents of the feces and you will see that great harm will result from intestinal stasis even in a mild form.

A noted authority states that, "It has been believed until recently that in health bacteria do not penetrate the intestinal wall. It is now known that bacteria constantly enter the circulation from the intestines. The blood of the Portal vein always contains bacteria. In the passage of the blood through the liver most of these bacteria are destroyed or passed out in the bile. Bacteria are often found in the urine in great numbers, having been eliminated from the blood by the kidneys, after escaping removal by the liver. The gall bladder frequently becomes an incubator for bacteria which form the nucleus for gall stones. The human intestine is not only exposed to infection by putrefactive bacteria, but it actually becomes an incubator for them. Since the

bile, mucus and feces produce a large amount of intestinal poison, constipation naturally causes intestinal toxemia or auto-intoxication. Bouchard, Tissier, Lane, and a great number of medical lights have within the last few years recognized the terribly far reaching and destructive effects of the absorption of bacterial poisons from the intestinal tract. Many of these putrefactive organisms cause deposits of pigments in the skin which are vulgarly known as liver spots. Indol, skatal, muscarin, cadaverin, and hundreds of other malodorous poisons are produced in the intestines by these putrefactive bacteria. Some authorities tell us that arterio sclerosis, diabetes, Bright's disease, and other chronic conditions, even epilepsy and insanity are brought on from long continued intestinal toxemia or the absorption of poisons from the intestines. When the intestinal mucosa is intact, it acts like a filter and permits only useful substances to enter the blood, but when by long abuse its integrity is broken down, it becomes so crippled that it ceases to function normally, and allows much damaging material to pass into the blood. Even the liver, the kidneys and the thyroid gland, and other poison destroying glands, become worn out with over work and symptoms of toxemia appear.

There are many cases of constipation with all the symptoms of intestinal toxemia, where the patient imagines that he is not constipated because he has one stool a day. The delay of the stool often occurs above the ileocecal valve where the contents are still fluid. This condition is highly favorable to the development of noxious bacteria. The protein is the food element on which the putrefactive bacteria thrive. The most destructive of these poisons are not produced in the presence of carbo-hydrates and acids. A coated tongue, foul breath, and putrid or evil smelling stools, are pathognomonic of intestinal stasis and putrefaction in the intestines, even if the bowels are moving

daily. The constant taking of drugs to relieve constipation not only renders the condition most obstinate, but actually damages the intestines, sometimes producing a state of congestion, chronic irritation and catarrh, which greatly injures the mucosa, denuding it and destroying its integrity. It is no longer capable of preventing toxic material from entering the blood. Roger says that there are one hundred and sixty different kinds of bacteria inhabiting the intestines, most of them are found in the colon where conditions are favorable for their development. Not all of these bacteria are pernicious. Nature gave us at birth a beneficent flora that is able to protect us against the attacks of the pernicious organisms. The colon bacillus, as shown by Metchnikoff, is an active poison producer when there is constipation. It is also an acid forming organism when it is well supplied with carbo-hydrates. Foul smelling stools are largely made up of poison forming or putrefactive organisms. It is therefore evident that if the number of putrefactive bacteria in the intestines can be lessened that it will prove a strong weapon in combating intestinal toxemia. To change the flora is not very easy. We must change our diet and employ other measures. The diet must not be favorable to the growth of pathogenic organisms. We must produce increased activity of the colon and introduce into the intestines a large quantity of acid forming or friendly bacteria.

The diet must contain but little protein, and that of a vegetable nature. Carbo-hydrates ferment, proteins putrefy. We are told by investigators that it is not only possible to change the bacteria in the intestines, but even the nature and effects of the colon bacillus and its associates instead of being pernicious, becomes helpful and protective. In the presence of a correct diet they actually resolve themselves into acid formers. Sugar and cooked starches are digested before reaching the colon. As raw

starch is an excellent food for friendly germs, some raw starch such as brose, or raw oatmeal should be partaken of daily. Equal parts of bran and rolled oats, softened by boiling water and eaten with cream and brown sugar, is extremely palatable as well as wholesome. It is a fine breakfast dish. Milk sugar if taken in large quantities will reach the colon in sufficient amounts to furnish a pabulum for the acid forming bacteria. When the colon is sufficiently supplied with carbo-hydrates, fermentation takes the place of putrefaction. This prevents the formation of poisons and encourages the normal emptying of the colon.

Chittenden and others of Harvard, found out that the sufficiency of a low protein diet to support life cannot be questioned. Folin says that ordinary food stuffs without meat and eggs contain enough protein to supply the body, so that any one taking a variety of grains, fruits and vegetables need not fear injury owing to the restriction of protein. This does not mean white flour and polished rice. I am not referring to *denatured* and *devitalized* foods. I mean the whole grain of the cereal, not something that has been divested of its normal constituents. I also refer to vegetables and fruits either raw or not subjected to such prolonged cooking that the vitamins are destroyed. When the housewife pours the water from her spinach and other green stuffs, and throws it away, she is depriving her family of the minerals and other materials that are sorely needed in the body economy. Combe and many others have shown that by eliminating from the diet all foods rich in protein, putrefactive processes may be controlled and the total number of bacteria produced in the intestines greatly lessened.

The beneficial results seen from an all fruit or milk diet is doubtless largely due to the change which it produces in the intestinal flora. But I have already transgressed too long upon your time. I will

only say in closing that I believe that all cases of constipation, not caused from obstructions and organic conditions can be cured without the use of drugs or surgery. I find that these cases are benefited by drinking at intervals a quart of water before breakfast and regulating the diet. It is well to add two tablespoonsfuls of bran or agar three times a day and at the same time a tablespoonful of Squibbs mineral oil. Fresh cultures of the Bulgarian bacilli should be taken, and some raw starch and fresh raw fruits and vegetables each day. Time does not permit me to go into details about diet. Increase the bulk by adding cellulose, lubricate the intestines to facilitate the movements of the mass. Drink plenty of water and do not turn a deaf ear to nature's calls no matter how feeble, and in time most cases of constipation will be relieved.

In very obstinate cases, massage, electricity and special exercises are indicated, though all cases are helped by exercise and massage of the abdomen.

AN UNUSUAL CASE OF INTESTINAL RUPTURE

By J. R. Sparkman, M. D., Spartanburg, S. C.

The following report is interesting because of the unusual kind of force operating in this case, the only one of its kind of which I have any knowledge. It is reported solely for this reason.

In some of the cotton mills there is a tank of compressed air with hose connections which is used to blow accumulations of lint cotton from the machines. Some of the operatives have gotten into the habit of using this compressed air to blow lint from their clothing.

Case Report: A. B. male, aged 14 yrs. was admitted to the Spartanburg General Hospital July 27, 1922, about 8 P. M.

Past History not important.

History of accident: He was using the compressed air (pressure 100 No.) to blow lint from his clothes. A fellow worker took the hose and offered to blow the lint from his back, and while doing this, in a playful prank, stuck the nozzle well up between his buttocks. The air immediately entered the anus causing rupture of the bowel and extreme inflammation of the peritoneal cavity. He experienced some pain but the distension was the most uncomfortable experience.

There was no immediate collapse and he was able to walk into the adjoining room. A physician who was called passed a rectal tube but with out giving any relief. A little bloody mucus showed on the tube. The accident occurred at a mill about twenty-five miles from Spartanburg and he was admitted to the hospital about two hours later. Physical Examination. Patient lying in bed on his side with the knees flexed upon the abdomen, listless, and apparently in shock. Skin cold, cyanotic and mottled. Finger nails blue. Lungs negative except for shallow, hurried breathing. Heart: Apex beat felt faintly in the fourth interspace, one and one half inches to the left of the sternum. Sounds clear but weak. Pulse 140, small and of low tension. Abdomen: extremely distended and tympanitic with general tenderness. Liver dullness obliterated. No free fluid. Extremities cold and mottled.

Ruptured intestine was diagnosed and patient was prepared for operation. Reasoning that the first point of much resistance to the entering air would be in the sacculations of the sigmoid and consequently most of the damage in this area, a low left rectus incision was decided upon. The line of incision was infiltrated with novocain and the needle inserted into the peritoneal cavity to allow a gradual escape of the air. With the escape of air the patient's condition gradually improved, the respirations became slower and deeper, cyanosis disappeared, the pulse slowed and became stronger and he

began to take an interest in what was being done for him. Numerous rents of the peritoneal coat of the sigmoid were found with the other coats protruding between the edges. Some of these tears were two inches long. There were many ecchymotic spots in the wall of the gut. The muscular and mucous coats suffered less than the peritoneal coat, no extensive tears being found.

A little ether was necessary to thoroughly explore the cul de sac. No damage to the extraperitoneal portion of the gut was found. Very little blood was found in the peritoneal cavity.

The lacerations in the gut were repaired in the usual way. No omentum could be found to wall off the damaged area, so the fluffed end of a cigarette drain was used for this purpose. The patient left the table in good condition and at no time during his convalescence did his condition cause any alarm. The drain was loosened on the fourth day and on the fifth day there was a little fecal leakage. This became quite free and the wound edges separated. Fecal drainage stopped about the third week and by strapping it was possible to keep the wound closed so that at the end of the sixth week he was ready for discharge with only a very small sinus remaining.

OBSTETRICS ON THE R. F. D.

By Geo. E. Thompson, M. D., Inman, S. C.

For several years past, I have receiving about once a year a very nicely worded form letter containing an invitation to present a paper on a subject of my own choosing at the next Annual Meeting of The S. C. Medical Association. I presume these letters are mailed to all the members, are intended to be more or less im-personal in character, and on the whole should not be

Read before the South Carolina Medical Association, Rock Hill, S. C., April 20, 1922.

considered too seriously, hence I have endeavored to be very kind to my Fellows by not presenting a paper except on one previous occasion.

However there are times when the temptation comes to break silence notwithstanding its golden reputation, and to that temptation having yielded, I am bringing in today some miscellaneous remarks on a subject more ancient than the pyramids, yet more or at least as much discussed as the 18th Amendment, and a science, in whose practice, one encounters as many surprises as Alice in Wonderland.

The practice of Obstetrics concerns one of our great, if not our greatest infant industry and while a great influence in the preservation and defense of government, it thrives and flourishes, seeking the aid of neither bonus, nor subsidy.

One of the first intimations of a future obstetric call in the rural districts may be the approach of the father to be who calls the Physician aside and tells him that he is expecting a "frolic" or a "log-rollin" at his house before long, or that "the bees are goin' to swarm, or that his wife is goin' to take a trip to New York" on or about Friday the 13th day of the following month. A preliminary call to the mother may be suggested, or a specimen of urine requested, and while a compliance with the plan may be intimated, oftentimes nothing more is heard of the matter until the anxious summons arrives.

The obstetric call may come in the night, but not always like a thief in the night, as thieves do occasionally take into account the condition of the weather. The obstetric call considers not the weather. You may hear your telephone's voice loudly calling at any hour, and the sound is recieved with the same warmth of welcome that you used to hear your father's voice calling in the early morning hours. And in the event that the receiver happens to be down, the call may come back by horseback. The pattering

hoofs upon the frozen ground bring to mind some of the famed horses and horsemen of history, especially "The Charge of The Light Brigade," and The Ride of Paul Revere.

Sometimes the message comes in another manner. One of Henry Ford's Benzine Specials, 1914 Loose Leaf Edition, may arrive at 12 Midnight. The owner thinking the car warning sufficient allows the motor to idle a while at the gate without knocking at the door, but finally decides that it isn't.

The Physician is made aware that some one is knocking at the door, but still has hopes that the caller is mistaken; that it is the wrong house, and the man across the street that the visitor wants to see. "Eventually, why not now" the door shows signs of yielding, and even the family dog, is awakened, and there appears to be no longer room for doubt.

After coming in contact with one or more rocking chairs, placing one or more Kiddy Kars somewhat precipitately on the opposite side of the hall, and taking a sideswipe at the one and only hatrack, the Physician finally finds the porch switch, and the atmosphere becomes a little quieter. Then he is told to come at once to——'s wife, 3 miles the other side of Swamp Creek Schoolhouse. He is also urged to "come at once", "right away," "quick as possible and finally the parting admonition to "come as quick as you can."

Then the 1914 Model aforesaid turns around, and hastens away at about the same rate of speed that the Carolina Special passes through the town of Inman going South one hour late. The Physician follows.

Of the many problems which confront the Rural Obstetrician, I can hope to discuss only a few within the limitations of this paper, and these briefly and in a general way.

Arriving at the home of the patient, a

scene very much in contrast to that presented by a well regulated maternity hospital is in evidence, and the "trained assistant" may be the most noted *Ex-Officio* Midwife of the community. She indulges in case reports very freely, and entertains the patient in her own way, comforting her by telling about the confinement of poor Mandy Effeltower, who had a "perfectly awful" time—3 Doctors 'n everything, or perhaps with the story of poor Susan Smith, who was addicted to triplets—the first of the "whole Smith generation" to be blessed in that manner, (or with twins even for that matter.)

She is unable to understand "why women take on so these days," and the conversation continues further, waxing eloquent with memories of an un-numbered uncharted age, when people had few responsibilities, dined on cabbages, and lived happily ever afterward.

After the Physician sees and examines the patient, one of the first questions asked by the relatives, will probably be: "Is it time?," And if the roads be bad, or the distance great, this may be a question of great importance. When the cervix is dilating, an answer is easily forthcoming, but when pains occur without material result, the case may present a problem not easy of solution, even to a chiropractor, as unfortunately neither the location nor character of the pains can always be relied upon as of material diagnostic value.

The waters may break by a partial lateral rupture of the membranes, or may apparently break by the evacuation of a fluid sometimes occurring between the Amnion and Chorion, hence this symptom within itself cannot be considered a reliable sign of labor. When there is a free flow of waters before the incidence of pains, and dilatation of the os, the force of hydrostatic dilatation will be lost and a slow labor may usually be expected.

The "show" is considered by many as a reliable sign of impending labor, and while

it is not without diagnostic value, its presence or absence is by no means pathognomonic, moreover this is a term applied to various kinds of vaginal discharges. A leucorrhoea cervical origin is frequently present in varying stages of pregnancy, and even in non-pregnant women, and is of no special significance. Even the presence of a bloody tinge may not be of great significance but there is a short time before or soon after the beginning of labor a change in the physical characteristics of the discharges in that it possesses more lubricating properties, imparting to the examining finger a sensation of oiliness, not unlike the feel of pus, and not distinguishable from pus by digital examination. Of course this condition is more evident in some cases than others, in multipara than primipara, and is probably of uterine origin.

When recognizable as such, I consider it the most valuable premonitory sign of labor that occurs before dilatation of the os induced by labor can be detected. It should be borne in mind however that normal labor is but the further accentuation of some symptoms, and conditions existing throughout pregnancy.

In doubtful cases when pain is marked the bladder should be emptied, (the catheter not usually being necessary), and this failing a large dose of Castor Oil administered. When the woman is not in labor, this drug will frequently relieve the pain especially if of intestinal origin. In case she is in labor it becomes a harmless echolic, and promotes a more rapid and easier labor, particularly in multipara. Unless the dose is unusually large, it acts more promptly when the woman is not in labor. In case this procedure does not produce relief of pain, a hypodermic of Morphine and Atropine may be administered as occasionally this will allow the cervix to relax, and labor to proceed. On the other hand when the pains are false, it often relieves. It can seldom do material harm to the patient, and fre-

quently she obtains several hours of rest thereby.

The sudden cessation of pain especially when accompanied by a severe headache during the actual progress of labor, should put the Physician on his guard as to puerperal Eclampsia, and personally I believe that the administration of a hypodermic of Morphine justifiable when there is a headache co-existing with labor, without explainable cause.

As to the treatment of an existing Eclampsia, there is still some difference of opinion, but it appears that there are two indications to be met:

First: Stop the convulsions.

Second: Prevent future convulsions.

Relieving the pains of labor by the administration of Chloroform and Morphine accomplish the first, and elimination the second. Veratrum Viride at one time held in great repute and though now condemned by some, I confess an abiding belief in its virtues as advocated by our own Norwood. Its hypodermic administration leaves a sore arm, and the alkaloid might be better.

I believe that too much emphasis has been placed on emptying the uterus. I do not resort to this procedure unless there is a well defined dilatation of the cervix, and there is some question in my mind whether it is otherwise justifiable for Eclampsia. Caesarian section is advocated and practiced by some. It is a beautiful and spectacular operation indicated in cases where for anatomical reasons the woman can not bear children. I am inclined to think that some of the indications (so-called) for its employment are as the mythical accomplishments thereby earned by the mythical MacDuff, and reported by one Wm. Shakespeare, alias Lord Bacon in the 16th century.

Emptying the uterus may prevent Eclampsia, but does not within itself cure Eclampsia when already established. Why resort to it? Whatever may be the exciting cause,

faulty elimination is responsible, and diuretics and purgatives should be heroically resorted to for relief.

Evans of Montreal studied 38 cases where Eclampsia was threatened, and induced labor in 32. He considers a Systolic Blood pressure of 160 ordinarily beyond the safety zone, however the Blood Pressure does not always indicate the gravity of the condition. Neither does the percentage of albumen in the urine.

When the patient is seen early enough, an old efficient and safe remedy to stimulate the elimination of toxic materials is the Bitartrate of Potash. In sufficient dosage, this drug is both a diuretic, and a cathartic. Should the condition appear urgent, more drastic drugs should be employed, of which calomel and the salines are to be commended.

In regard to the third stage, the majority of women are usually anxious to have the placenta delivered early. Too early delivery increases liability to haemorrhage and infection, and predisposes to after pains. On the other hand severe haemorrhage sometimes occurs even before its delivery.

In the majority of instances the Physician may usually begin the delivery of the placenta one-half hour after the child is born. Slight pressure may be made on the uterus through the abdominal wall, at the same time making slight traction on the cord. Frequently the placenta is already in the vagina and only a slight traction on the cord is necessary. Should the above procedure not accomplish the desired result, the placenta should be left alone a few minutes, and the effort repeated, if necessary several times.

I am aware that this method is considered at variance with the methods employed by nature, and perhaps would not be a good answer to hand in to a State Board of Medical Examiners, but it is practiced by a great many Physicians, often contributes to the earlier comfort of the Mother, and is

safe provided due precautions are taken. The pressure over the uterus should be gradually applied, and the more energetic pressure advocated by Crede reserved for cases where complication exists.

I do not fear leaving a portion of placenta in the uterus as much as I would fear going after a remaining portion. Infection of the uterus takes place through the cervical mucosa, not through the body, except in cases of malignancy. This fact was established by Leopold over half a century ago.

What is true of other complications of labor is also true of Post-Partum Haemorrhage, the best way to treat it, is to prevent it.

Anaesthesia and many constitutional diseases are predisposing causes, and it is usually due to failure of the uterus either to contract or maintain contraction. It may occur after the separation of the placenta, and either before or after its delivery. Experience has taught me that no uterus is to be trusted alone long at a time for at least one hour after childbirth. Haemorrhage should be watched for early and soon after the child is delivered it should be ascertained whether or not the womb is contracting. If not it may be grasped through the abdominal wall sufficiently to produce some contraction. After the delivery of the placenta, the mother may be taught to grasp the uterus lightly for 20 to 30 minutes. She will usually not grasp firmly enough to produce much pain, and will maintain sufficient contraction. In case she is unable or unwilling to do so, the duty may be attended to by some one else.

It should not be forgotten that there is a form of marginal placenta Previa which occurs during the latter part of the second stage, and produces haemorrhage during each period of uterine relaxation.

When Post Partum Haemorrhage does actually occur 1 c. c of Pituitrin should be administered Hypodermically, a teaspoonful of F. E. Ergot given by mouth, or better Ergotole either by mouth or hypodermically

—the foot of the bed elevated, and pressure supplemented by cold applications made over the uterus. If necessary to resort to hot douches, 1:8000 BiChloride may be safely used. I have never been able to understand the logic of using Normal Saline Solution in douches, this solution being such a good culture medium for bacteria.

Some authorities question the action of Ergot kept in bottles for a considerable length of time. Its potency is more permanent than these writers indicate.

The temptation to use Pituitary preparations is often very great, especially in rural, practice where hours and distances are long, and no doubt it has a field of usefulness, and the mother is often grateful for its employment under certain conditions. Its effects are less marked in primipara, than in multipara. I have had occasion to note its effects in a few cases of twins. It did not materially hasten the birth of the first child, but did the second. Its effects are usually spent in an hour or less. In one instance where 1-2 ampule had been administered at 1-2 hour intervals, the "pains" subsided about 1-2 hour after the 3rd dose. Later "pains" were apparently induced by pressure on the perineum from the vaginal side, and delivery was accomplished spontaneously.

The woman of the country enjoys the reputation of being stronger physically, less sensible to pain, and less prone to complications than her sister of the city, and no doubt these factors are to be considered in the management of the puerperium.

To the rural practitioner the discussion of Obstetrics brings memories of a long night ride over uncertain roads and unsafe bridges to a lonely farmhouse of a bright log fire, a dim kerosene lamp, a creaking shutter, of a moaning and crying yet trusting primi-

para on a bed none too clean, of the long hours well described by Woodrow Wilson's famous phrase "watchful waiting."

Slowly the hours of the night are being numbered by an ancient and erratic timepiece—how slowly to she whose suffering increases with the counting of time—much more slowly to she who bore her, and who now alternately cheers at the bedside, and weeps in the next room. The last half ounce of the anaesthetic is dripping on the inhaler, yet twixt pain and near exhaustion the patient cries for more. Realizing the feebleness of earthly aid, she invokes help from Him, the mention of whose name reminds of that Divine acouchment in a Bethlehem manger 2000 years ago.

But the night at last draws to an end, the wind forgets the creaking shutter, chanticleer screams his challenge on the morning and hears the replies of his rivals. We look through the window on a bleak Winter morn, cheerless but for the brightening light in the East, but as the dawn grows, the patient's strength returns for the final effort.

Almost despairing of relief she enters the shadow—the deepest shadow of life this side the grave, to emerge gloriously triumphant. We gather around the bedside and usher a new being into the world, amid scenes which the archives of the past have given to us poets, financiers, and statesmen.

But of these the mother thinks little, for whether it be a mansion on a boulevard, a dug-out on the plain, or only a cabin on the hillside, there is a time in the life of she who embraces true motherhood cherished by her as the greatest hour of life whether of the past or the future to be, and that is the hour when having waded through the fires of maternal pain, she hears a new cry, takes in her arms a wee bit of humanity, and looks into the face of her firstborn.

SURGERY

SAMUEL ORR BLACK, M. D., Spartanburg, S. C.

CHOLECYSTITIS

Goodwin, in the Southern Medical Journal in Sept. 1922, states that cholecystitis is now almost universally accepted as being of infectious origin, that the causitive bacteria are carried in the blood, lodged in the liver where they cause a hepatitis and from there they find their way into the gall bladder.

More alertness in locating and eradicating focal infection, he believes will result in decreasing the number of gall bladder disorders.

Rosenow has shown that certain streptococci have a definite affinity for the gall bladder and that they constitute the most frequent organism found in gall bladder pathology. When injected directly into the lumen of the bladder, they cause no disturbance, but following their introduction into the blood stream he has shown that they do cause cholecystitis.

Goodwin, no longer believes in gall bladder infection as a result of intestinal bacteria, leaving the duodenum, and finding an abode in the gall bladder after traversing the ducts. He states that the duodenum will burst below the sphincter muscle of Oddi gives way to permit regurgitation.

Cholecystitis, with or without stones, is essentially a disease of middle and advanced life

It occurs much more frequently in women than in men, the usual ratio is of four or five to one, or more

It is far and away more frequent in women who have borne children, than in women who have not. Many women date their first attack to a period while carrying

their first child or to a period immediately following parturition.

Goodwin insists that pregnancy undoubtedly has a definite bearing on the incidence of gall bladder infection and states that out of 438 consecutive cases in women 304 or 70 per cent had borne children. As to how pregnancy incites this condition he does not state.

His observation coincides with ours as regards frequency of this disease in women who have borne children.

Whenever the abdomen is opened and no frank infection is present, the gall bladder should be palpated for the presence or absence of stones, as 30 per cent of the cases in which stones are left at the time of other abdominal operations will later give symptoms.

He states that typhoid fever holds a less important place as an etiologic factor in cholecystitis than it did a few years ago. This is in keeping with our own observation, as we have operated on a goodly number of gall bladder cases that have never had typhoid.

In the vast majority of cases the diagnosis is comparatively easy, but in cases without colic or definite pain, where the complaint is mostly dyspepsia, it is frequently almost impossible to differentiate between cholecystitis, chronic appendicitis, or ulcer formation until the abdomen has been opened.

Jaundice, complicating cholecystitis, may be due to a stone blocking the common duct, to a thickening of the duct wall or a mucous plug jamming the lumen, or to the pressure of a distended gall bladder on the common duct.

He advocates cholecystectomy as the

operation of choice, stating that the convalescence is shorter and that the liability of future trouble is greatly lessened.

Where there has been a pathologic gall bladder for a considerable time there is reason to believe that a hepatitis or pancreatitis or both may also exist and to remove the gall bladder or to drain it, will not always relieve the symptomatology produced by these diseased viscera which through nec-

essary are permitted to remain.

The author has very little to say regarding the time of operation for acute gall bladders.

This to our mind is of paramount importance, and we are now making every effort to have the acute gall bladder subsided before subjecting it to surgical measures. To do so, greatly lessens the liability of serious complications, insures a easy convalescence, and an almost sure recovery.

PEDIATRICS

WM. P. CORNELL, M. D., Columbia, S. C.

The Child Hygiene Bureau's County Unit Plan.

We physicians who, as members of the State Medical Association, constitute the State Board of Health, are the guardians of the health of our respective communities. Owing to the deplorable fact that our maternity and infant death rates are disgracefully high, it is "up to us" collectively and individually to do our share in preventive, as in remedial measures. This can be easily accomplished provided we do not shirk our share of the responsibility and duty.

The State Board of Health (that's you and I) desires, through its Bureau of Child Hygiene, which was established by our General Assembly of 1919, to carry its work of practical preventive medical education into every county in the State through the establishment of a Welfare Unit in each county.

A County Unit consists of a registered nurse of special post-graduate training in public health work; her office and equipment, and her transportation automobile.

What the county nurse does:

1. She teaches parents practical nursing by daily bedside lessons during illness in their home.

2. She visits expectant mothers teaching her what to get and how to prepare for her coming child; urges the necessity of a doctor in attendance, and teaches how to bathe and nurse, and care for the child.

3. She establishes Health Centers, where mothers may come for practical advice, and have their babies weighed and, when advisable, gets them to call their doctor.

4. She organizes and teaches classes of midwives.

5. She inspects schools and school children, and gives health talks to school children.

6. She visits tubercular patients and instructs them as to sanitation and care against infection of others, and helps them, when requested, secure sanatorium admission.

7. She assists any doctor in every way possible, and refers many patients to him for care and advice.

She does not: make diagnoses nor practice remedial medicine.

It would be hard to estimate the comfort and value of such an officer to a community.

Three thousand dollars a year will equip and maintain such a county health unit. In 1917, the forty-five counties of South Carolina averaged about 36,000 population each.

This would represent an expenditure from each person of about ten cents a year.

Will any one person in any county say it would not be worth it?

Surely, in such an enterprise, the State Board of Health (you and I) will not, through disinterest and lack of co-operation, deliberately obstruct and impede the efforts of our own Bureau of Child Welfare?

Let us see that: 1st, our own County Society at once passes resolutions forming a special standing committee on Child Welfare, which will voice the Society's approval and co-operation of the Bureau's activities. And let Dr. Hayne be so notified.

2nd. Let each doctor individually say the good word for it, when occasion arises, to his patients and to his County Legislators.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

Hereditary Syphilis. Julio Placo and Amancio Moral. *Semana Med.* April 20th, 1922. From *Int. Med. & Surg. Survey*.

It is commonly claimed that the transmission of Syphilis may be (1) Hereditary in which form the disease is transmitted directly and develops during the first period of pregnancy. Its origin being either (a) Spermatogenic; (b) Ovular or (c) Ovulospermatogenic and the prerequisite being the infection of one or both parents has taken place prior to conception; or (2) Uteroplacental in which form the disease is transmitted from the infected mother to the normal embryo. Further proof shows that Syphilis is not truly hereditary in the sense of ovular transmission but is transmitted by the uteroplacental route only. In other words the mother of a Syphilitic child must be Syphilitic. However in tertiary Syphilis of the mother, the sexual cells of the mother are affected by the toxins of the disease and become chronically changed so that the ova transmit the dystrophic and amicrobic tendencies. There is no basis for the theory of transmission by the disease by way of the mother's blood. Infected foetus transmitted to mother does not exist. The role of the father in the transmission consists in the contamination of the mother and in

the Dystrophic changes in the spermatozoon.

In conclusion it may be said that microbic heredosyphilis is an infection acquired during intra-uterine life by uteroplacental transmission.

SPERMATOZOIDS IN SYPHILIS

V. Widakowich. *Rev. Assoc. Med. Argentina*, December, 1921.

Condensed from *Int. Med. & Surg. Survey*.

Various authors considered defects in the spermatozoa to be responsible for anomalies of hereditary. In such cases mother cells of the ova and spermatozoa are injured by the toxins from the original disease and the infective organism. Degenerative -- later produce anomalies without harboring the infective organism. Degenerative changes have been demonstrated in the mother cells of the spermatozoa. Aberrant forms presenting all the intermediate combinations from spermatozoa with one head and one tail to those of four heads and four tails. Accordingly these altered spermatozoa produce heredosyphilitic stigmas that are not due to the presence of the spirochete. The fact that wives of cured Syphilitics bear children with heredosyphilitic stigmas without becoming infected themselves would seem to prove the applicability of Weismann theory.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

THE PHENOLSULPHONEPHTHALEIN TEST

The phenolsulphonephthalein test for the estimation of the functional ability of a kidney was introduced by Rowntree and Geraghty about ten years ago. Previous to this, there were other tests being used for the same purpose, but these were far from satisfactory. Some were not only so very complicated and laborious in execution but unsatisfactory as well. Reference is here made to the quantitative estimation of various constituents of the normal urine, such as urea, phosphates, uric acid, etc.

In 1897, Achard and Castaigne introduced methylene blue; in 1903, Voelcker and Joseph introduced indigo-carmin for the estimation of renal activity. Other tests which might be mentioned that have proved inadequate are potassium iodide, lactose, diastase, phloridzin and rosaniline. Of all these, only the indigo-carmin is of any special value, this having a limited but definite field of usefulness only to the urologist. The phenolsulphonephthalein test possesses very nearly every advantage that the indigo-carmin offers with a great deal more besides, and has therefore almost entirely replaced indigo-carmin.

The tests of functional ability of the kidney are divided into two main classes: 1. Tests of excretion, and phenolsulphonephthalein test is the best one of these. 2. Tests of retention, ascertained by the quantitative estimation of various normal constituents of the blood such as urea, non-protein, nitrogen, creatinine, etc., in order to determine variations from the normal. Happily, a combination of these gives us information

of great importance; it aids the internist, the general surgeon, the pediatrician, and all other specialists.

It is a matter of common knowledge among the profession that in many instances the information obtained merely through the chemical and microscopic examination of urine is of little value in ascertaining the extent of the disease or the functional powers of the kidney. Frequently from the urinary findings and clinical examination, there is no indication of the severity of the renal lesion. The presence of casts and albumin does not signify that the function is necessarily impaired. Many cases showing these signs have perfectly normal kidney function. Besides, there are many cases of grave kidney disease which show neither albumin nor casts.

The phenolsulphonephthalein test is purely one of function and not of disease. There may be marked impairment of renal function without any demonstrable renal lesion. On the other hand, there may be a fairly extensive renal disease with a normal functioning kidney. However, usually the functioning power of the kidney is decreased in those cases of renal disease where there is actual tissue destruction in the parenchyma. Permanent impairment of function means permanent kidney disease, whereas, temporary impairment, such as may occur in toxic nephritis, usually indicates no serious pathological condition.

The Phenolsulphonephthalein test is of considerable value in the prognosis of the various forms of nephritis. It will also help to detect a nephritis in some cases when other examinations have failed. In surgery, and particularly in genito-urinary surgery, it is of the greatest value. In surgery of

the prostrate and kidneys it is one of the greatest aids in enabling one to decide whether or not a case is operable. It also enables one to determine the extent of a diseased kidney so as to decide in many instances on nephrectomy or nephrotomy. It also tells us the function of the other kidney so that it may then be determined whether any operation can justifiably be done.

The application of the phenolsulphonephthalein test is so simple that it may be employed by every member of the profession and almost in any place. Hynson, Westcott and Dunning, of Baltimore, puts out a colorimeter for the easy determination of the amount of 'phthalein that is excreted. There are directions with each colorimeter stating how the test may be performed. The drug is conveniently put up in sterile ampules containing each a little more than 1 cc and may be obtained from the same firm.

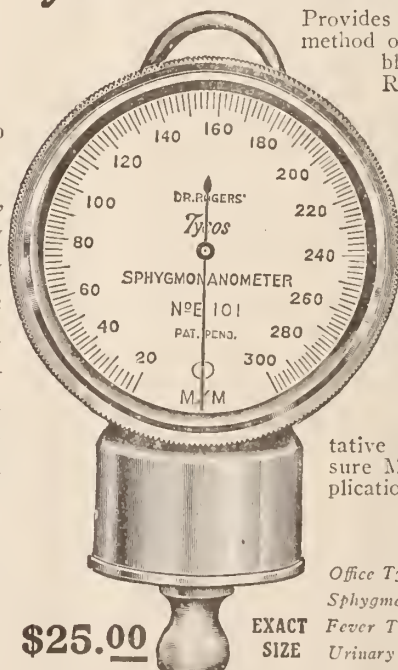
The drug has been shown to be entirely excreted by the kidneys, and normally 60 per cent to 85 per cent should be eliminated within the first two hours after its administration. It may be given subcutaneously, intramuscularly, or intravenously. It is non-toxic, and non-irritating to the kidney. Braasch has shown that the intravenous method gives the better index of the excretory power of the kidney. The reason for this is that in some individuals, and especially when a heart lesion is present, the drug is not as readily taken up from the tissues as it is in others. The intravenous administration assures the prompt carrying of the drug to the kidneys for its elimination. He thinks that the intra-muscular administration probably shows more accurately the condition of the tissue. But such information is of no special value and it will certainly be more reliable to use, whenever possible, the intravenous injection.

ABSTRACTS

RELAPSING FEVER IN CALIFORNIA

LeRoy H. Briggs, San Francisco (*Journal A. M. A.*, Sept. 16, 1922), reports the cases of a man and his wife who, while camping in California, were probably bitten by some suctorial insect, presumably a bedbug or a tick, although this cannot be proved. In each case, eight days later, a paroxysm of chills, fever, malaise and prostration ensued and lasted three days. In the case of the husband, three relapses occurred, each more severe than the preceding. With the wife, two relapses occurred, also of increasing severity. During the four observed paroxysms, spirochetes were found in the peripheral blood in increasing numbers. Intravenous injection of 0.45 gm. of neo-arsphenamin promptly terminated the infection in both instances.

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SOCIETY REPORTS

LEXINGTON COUNTY MEDICAL SOCIETY

The members of the Lexington County Medical Association held their meeting in the auditorium of the Batesburg-Leesville High School building October 4th. Superintendent W. F. Scott extended a welcome in a happy manner to the members and their guests. Miss Wilby, the music teacher, had her pupils give some vocal and instrumental selections, which reflected much credit on her and the pupils. After these greetings, a clinic was held and elicited interesting discussions.

Dr. Fouché of Columbia, read a valuable paper on his examining of more than a thousand ex-soldiers and his observation and conclusions of the effect of poisonous gas on the lungs.

A recess was taken and Miss Barron, domestic science teacher, and her pupils, prepared and served a repast that was pronounced by the members as perfect in every detail. The members were shown through the building, where they saw the equipment and workings of all departments going on. Dr. T. H. Dreher, St. Matthews, read a paper entitled "The Business part of the Country Physician," which was favorably received and commented on.

The following officers were elected: Dr. Karl I. Able, president; Dr. D. R. Kneese, vice president; Dr. J. H. Mathias, secretary-treasurer. The next meeting will be held at Lexington.

All the doctors who had not seen this high school building before expressed great surprise and gratification at the building, equipment; faculty and splendid work done, not only for the community, but for the State.

After adjourning the members and their

guests went to Summerland College, where they were shown through the different buildings. The student body and faculty assembled in the auditorium, when Drs. Fouché, Dreher and Ridgell delivered addresses, which were very appropriate and appreciated. The college expression teacher, Miss Oberdorf, gave some readings that were greatly enjoyed by all, and marked her an artist in her work. The doctors were equally and much surprised and pleased at the college, and its work, as they were of the high school, and spoke enthusiastically of this community and the treatment accorded them—the school and college.

The citizens of our community are proud to have the doctors meet here any time, and consider it a pleasure to show them every courtesy they can.

DARLINGTON COUNTY MEDICAL SOCIETY

Date of the meeting September 1st, 1922.
President A. D. Gregg in the chair.

Number present 6. Number on roll 18.
Minutes read and approved.

Dr. J. J. Post, County Health Officer, made an interesting talk on the work done during this year by the County Health Department, stating that some of the work undertaken was holding tonsil and adenoid clinics, baby clinics, milk campaigns, and anti-typhoid inoculations, the latter having been carried on for eight weeks.

He is now planning to hold tuberculosis clinics among the negroes throughout the county.

He states that out of 57 deaths from tuberculosis in the county during third year, 54 of these were negroes.

Julian T. Coggeshall, Sec.

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The Journal

OF THE

South Carolina Medical Association

Published Every Month Under the Direction of the Board of Councilors.

Entered as second-class matter February 9, 1916, at the post office at Greenville, South Carolina, under the Act of March 3, 1879.

Acceptance for mailing at special rate of postage provided for in Sec. 1103 Act of October 3, 1917, authorized August 2, 1918.

Annual Subscription, \$3.00

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EDITORIAL

DEATH OF DR. J. J. WINGARD, OF LEXINGTON

One of the splendid physicians of South Carolina passed away December the 4th.

Dr. Wingard was not only a good doctor but he was loyal to the best interests of the business, and social life, of the community in which he lived.

The committee on Necrology will report fully to the State Association, the details of Dr. Wingard's life, but at this time we wish to record his long and faithful services as a member of his county society and his faithfulness as a secretary.

To him was largely due the fact that only two or three times it is said, in nearly twenty years, has this society failed to meet in regular session.

To the State Secretary, Dr. Wingard's

prompt reports (generally the first each year) were always appreciated and proved conclusively that the smaller county societies, if they so desire, may function regularly and effectively.

DEATH OF DR. F. A. COWARD

In the death of Dr. F. A. Coward at Helena Montana, December the 3rd., the South Carolina Medical Association loses one of its distinguished and brilliant members.

Dr. Coward's outstanding contribution was as founder of the State Board of Health Laboratory, over which he presided, as Director, until his call to a similar position in Montana, August 1st, of this year.

Proper tribute to Dr. Coward's Memory will be presented by the committee on Necrology.

THE LEGISLATURE. WATCH IT

In a few days the General Assembly will convene at Columbia, and the medical profession should be alert from the start, to combat adverse bills and to lend support to constructive measures.

Each county society was authorized by the last House of Delegates to appoint legislative committees to co-operate with the Committee on Legislation of the State Medical Association. If this has not been done in any of the constituent county societies, it should be done at once.

The excellent paper in this issue by Senator Crosson, should be read carefully by every member of the State Association in order that the problems confronting us may be better visualized and thus arouse us to our duty in upholding the honor of the profession.

HOLIDAY GREETINGS. RETROSPECT. THE FUTURE

This issue of the Journal will mark the close of the eighteenth year of publication, and while these eighteen years have been the most trying ever experienced in the history of medical journalism, many having succumbed to adverse conditions, we are glad that our journal has surmounted all these obstacles and is today a representative scientific, and organization publication.

The South Carolina Medical Association during 1922 has continued to prosper, the membership has kept up to the normal.

It is gratifying to report also, that the scientific contributions of our members to the constituent county societies and to the National, regional and special societies, have far surpassed any year in our history.

For the first time in a decade the Journal has had more papers submitted for publication than could be published. The State Board of Health of South Carolina continues to attract the attention of the

country for the vast amount of work accomplished in it's various departments with the appropriations available.

The State Board of Medical Examiners functions admirably under the revised laws of recent years.

While the cults give the regular profession serious concern there is ample evidence that they have never flourished in South Carolina to the extent reported in many other States.

The Medical College of the State of South Carolina is becoming more popular each year with prospective students, therefore a pressing need for enlargement of facilities will soon become imperative.

1923, now so close upon us, will find the officers of the South Carolina Medical Association under the enthusiastic guidance of President Fred Williams with rapidly maturing plans for the seventy-fifth anniversary meeting in Charleston, April 17th, 18th, 19th.

The Journal wishes that every reader may have a happy Christmas and prosperous New Year.

DR. JAMES WOODS BABCOCK—AN APPRECIATION

By J. H. Taylor, M. D., Columbia, S. C.

While dining in a Kansas City club some years ago as the guest of a prominent member of the profession, one who had been intimate with Dr. Babcock in his Harvard days, the writer was astonished to hear this gentleman state that he had known more really big men from a little place called Chester in South Carolina than from any community approaching its size within his knowledge. Among those mentioned were Dr. J. W. Babcock and Edward Strobel. Those of us who, like this friend of his youth, were privileged to know Dr. Babcock

This appreciation of Dr. Babcock was prepared officially for the Columbia Medical Society by the following appointed committee: Dr. C. F. Williams, Chairman; Dr. J. J. Watson, Dr. J. H. Taylor.

intimately will sense the honor the Columbia Medical Society has in extolling him as a man and for his many accomplishments.

James Woods Babcock was born in Chester August 11, 1856, the son of Dr. Sidney E. Babcock and Margaret (Woods) Babcock.

Through the influence of his friend Strobel, then a student at Harvard, Dr. Babcock entered Phillips Exeter Academy, Exeter, New Hampshire in 1874, graduating four years later. He then entered Harvard, getting his degree of A. B. (cum laude) in 1882. Continuing his studies at Harvard he graduated from the medical school in 1886. One can imagine the privilege he felt it to be in after years that his was the last class lectured to on anatomy by Dr. Oliver Wendell Holmes. During his last year there he was house officer at the McLean Hospital, then located at Somerville. After graduating he was appointed assistant physician to the hospital and remained there until at the suggestion of the late Dr. B. W. Taylor, then chairman of the Board of Regents of the South Carolina State Hospital, Governor B. R. Tillman persuaded him to accept the superintendency of the latter institution. He left this great, richly endowed Massachusetts institution solely on the ground that his native State had need of his services. This position he filled from 1891 to 1914.

In 1892 he married Miss Katharine Guion of Lincolnton, North Carolina.

During his stay at the S. C. State Hospital two splendid achievements stand forth as worthy of recognition. As his friend, Dr. Herbert B. Howard of Boston points out, he was the first to call attention to the enormous death rate from tuberculosis in the insane hospitals, both north and south. In 1904 he read a paper before the American Medico-Psychological Association dealing with this subject, the title of which was "The Prevention of Tuberculosis in Hospitals for the Insane." This article was published in Vol. No. One of the

Transactions of the American Medico-Psychological Association.

In 1907 he independently identified pellagra as existing in this country and in the institution of which he was then the head. Further more, through his publications he did more than any other one man in America to bring this disease to the attention of the profession and the public. In collaboration with Dr. C. H. Lavender of the Public Health Service he published a translation, with many elaborations, of Dr. Marie's book on pellagra—the first treatise of its kind in the English language.

The esteem in which he was held by the Italian profession may be gathered from the following editorial article appearing in the quarterly number for January—April 1922 of the *Rivista Pellagologica Italiana* (Italian Pellagra Review.)

"With renewed sorrow we announce the death of Dr. J. W. Babcock of Columbia, S. C.

"He was the first to recognize pellagra in the United States and to identify it with Italian pellagra; but he had to struggle long and suffer many bitter checks before the truth announced by him was imposed on the American medical world and pellagra came to form part of official pathology.

"A convinced follower of the theories of Lombroso, he never abandoned them, accepting, however, in part and in so far as true, the newer and most recent doctrines.

"It is due to his studies, to his researches, to his tenacious propaganda with word and pen in articles in the press and in scientific reviews, to his communications before the annual congresses of the American Medical association or in the biennial meetings of the National Association for the Study of Pellagra, founded and directed by him, that the United States public health service has vigorously enforced and conducted the fight against the new scourge that was already dealing its blows in the Southern States, achieving in little more than a decade the present comforting results.

"Justly do the journals of America exalt Dr. J. W. Babcock, the pioneer and the humanitarian, whose fame will grow with time, as well as the rare and perfect gentleman, beloved and esteemed by all.

"We who for so many many years have had with him—so remote in space, so near in affection—pure ideal scientific relations—we bow reverently in memory of the lost friend and to him we send the flower of remembrance."

In 1905 the South Carolina College in grateful recognition of his services to the State conferred upon him the degree of L. L. D.

After severing his connection with the South Carolina State Hospital in 1914 he established and conducted the Waverly Sanitarium for the treatment of nervous and mental diseases just outside of Columbia.

From 1915 to his death he was professor of mental diseases at the South Carolina Medical College.

Although he had published nothing on the subject, yet, of late years, Dr. Babcock had become tremendously interested in the new psychology and there was little in existence from either the school of Freud or Jung that he had not mastered. The one subject he would not touch was metaphysics. He had little acquaintance with or liking for Schopenhauer and Nietzsche.

Thus in a sketchy way is outlined Dr. Babcock's career, but it remained for his close associates to get the true flavor and assence of his gentle and rare personality, a personality governed by unfailing modesty and a cheerful readiness for self extinction. Together with this gentleness and modesty, however, was mingled a truly painful sensitiveness that rendered him so easily misunderstood by those who knew him but slightly.

His erudition was remarkable and the multiplicity of his interests astounding. In his youth he had been a collector of stamps and of relics of the Indians who had once

made their homes in his neighborhood. This latter remarkable collection is now in the library of the University of South Carolina, presented by him to that institution.

His mind was a veritable storehouse of local and State history and antedate. It was seldom that one with literary tastes visited Columbia without calling at his home. However, old furniture, the theatre and books were his obsessions, if we may term them such. The same subtle quality of aesthetic appreciation that made him the lover of the one made him a connoisseur of the others. A most discriminating collector of old furniture he had gradually gathered in his home many unusual and invaluable examples of the old English masters. Further more, he had many amusing stories to tell of his adventures in company with his friends, Dr. J. J. Watson and Mr. August Kohn, in their quests of the scattered trappings of ante bellum homes of culture. Together they haunted the auction rooms and explored isolated negro cabins often finding in the latter gems of furniture given to the negroes by their former masters or otherwise acquired.

The same certain and ready reaction to the artistic in furniture made of him a most ardent lover of the theatre. He had seen the complete repertoire of all the famous old players and remembered the names of even the obscure members of the company. In this, as in reading, he exhibited a most accurate and retentive memory. A play that appealed to him was not seen once only, but many times. Jas O'Neil in "The Count of Monte Christo" he had seen over and over again. Moreover when it was hard to explain the real differences between the ideals of the new theatre and that just past, he, although or perhaps because he had been an ardent follower of the old theatre, was already prepared for the change and showed it by his ready grasping of the real reforms that were being sought after. That kind of mature point of view toward theatre technique is just now coming

to actors and he who had not followed plays closely for some years was yet prepared for all of this that was sought revolutionary. That indeed required a degree of aesthetic interest and understanding that is rarely found in the man who is also occupied heartily with his profession.

Books! One can hardly know how to truly value or express his passion for books! He loved them for themselves and they were his constant companions. Wherever he was at home or abroad, he frequented the book shops. At home he made his daily visit to that of Mr. Gittman, although there entered also into this his fondness for Mr. Gittman himself and the little group of bibliophiles who gathered there. When in France some years ago traveling with Senator Tillman those queer little old book stores one sees on wheels lined up along the banks of the Seine were his constant delight. He fairly reveled in London, not only on account of those bookish treasure troves so charmingly told us of by E. A. Newton in his "The Amenities of Book Collecting" and "The Magnificent Farce", but also because of his love for the English classics. Thackeray, especially, was a favorite.

He was an insatiate reader, but along with his reading of the new books he re-read his old friends all the time. Latterly he had gone back particularly to Kipling and Stevenson for what he termed "a good

time." He got the most out of leisurely reading because he had the leisurely method himself. He was always interested in the facts about the author and the back ground of the book and would have these thoroughly in mind when reading. Kipling, however, was his eternal favorite. Him he knew from cover to cover, read and re-read. "Kim" and the "Jungle Book" one might say he knew by heart. Further more, the charm of his presence was also much added to by that delightful habit of sharing his literary delights by reading aloud choice passages that had given him pleasure. His generosity was such that a friend could never leave his home without one or more books that had been graciously forced upon him tucked under an arm, books that had appealed to Dr. Babcock for one reason or another.

Since the Christmas holidays he had been confined to bed with certain cardiac conditions and on March 5, 1922 he suddenly passed away in an anginal attack surrounded by those ever companionable books he loved so well. Truly one might now have him say with Shelley—

"My days among the dead are cast
Around me I behold
Where'er these casual eyes are cast
The mighty minds of old.
My never failing friends are they
With whom I converse day by day."

ORIGINAL ARTICLES

THE RELATION THAT LEGISLATION SHOULD HAVE TO THE TRUE MEDICAL PROFESSION.

By D. M. Crosson, M. D., Leesville, S. C.

Mr. President, and gentlemen of the South Carolina Medical Association, having been requested, by our worthy secretary, to write a paper for this meeting, of our association: I am here, and I have chosen this subject from which, I will endeavor to give you some ideas of which, I shall at least claim originality and by which, I hope to present to you, some thoughts, to show you the status maintained today in the medical world and why I think we are right and why our State Legislative enactments should support and protect us. I do this too, because any one can write an essay, on any common medical, or surgical subject and especially when they smell fresh with the odor of books and writings of learned authors, and I think too, we should be informed of the status we should maintain from a Legislative stand-point and what is necessary to do to help protect ourselves from the inroads of "Quacks" and from those who occupy seats in our Legislative Halls; who through ignorance and for want of Professional notoriety are lending a hand, against The True Medical Profession practicing in South Carolina and thereby doing us as true medical practitioners, a great injustice, as my Legislative experience and observation has taught me to believe.

I shall at first, endeavor to set forth why

I deem our system of Allopathic medicine, the only system of true medicine and why then it should be legally fostered and protected.

The history of The True Medical Profession, gives us information of a learned profession and includes with a wide range of scientific knowledge and practical skill.

The history of medicine, from a small beginning in Greece, can be traced to give a synoptical view of medicine, including its scientific, or philosophical position, its subdivisions, as an art and discipline and its relations to the Body politic and the public necessity.

The true Science of the practice of medicine, is the theory of diseases and remedies.

The best encyclopedic authors, we can find, tell us, "while the notion of disease is necessarily, or inevitably correlated with the notion of health, there is no necessary and inevitable relation, but on the other hand, a merely conventional association, between a disease and a remedy.

The part of the science of medicine, which corresponds to the theory of remedies, is not therefore in a position scientifically inferior to the theory of diseases; for each article of the materia-medica-apart from a few inert substances has a certain effect on the organism in health and disease, which is ascertainable, with scientific precision.

Those properties and actions of drugs are the subjects of pharmacology and toxicology: the circumstances under which the several articles of the Materia-Medica become remedial are the subjects of therapeutics; is dependent on its scientific position, upon the completeness of the theory of disease, or pathology."

Disease is the correlative of health.

Since the days of Aesculapius, Galen and Hippocrates, who were recognized as among and the principle founders of the Allopathic system of medicine and taking disease to be a deflection from a line of health.

Hippocrates, who was taught by his father and other learned scientists like Sophocles, Heroditus, Socrates and Plato in the best schools of his day, at Cos and Cnidus, was the first to cast off superstition and priestcraft and based the practice of medicine on the principles of inductive philosophy, hence he was called, "The Father of Medicine."

In that period of intellectual development, with his powerful mind and influences, he placed true allopathic medicine on a par with all other great sciences. He at that day condemned charms, amulets and incantations and we should today furnish men from our own schools to carry on this great work and supply the needs of the public and Legislation should protect us and help to blot out charlatanry.

The first principles of a knowledge of medicine and its practice was to have a scientific knowledge of anatomy and physiology, so that, they could in a case of disease, make application, or administer the proper drugs, so as, to keep all the organs of the body in a healthy condition, or by the administration of same bring them back to normal—whether the abnormal conditions, or disease, was produced by a toxic or torpid condition, which impeded the proper functioning of any part of the human system and which later includes all germ theories etc.

These principles, as laid down, in those early days, was the foundation of the true medical profession, which has been improved upon under this same allopathic system, that we have a profession today, superior to any in the known world, for, the most wondrous piece of mechanism painted by the plastic fingers of omnipotence is man, and a scientific knowledge of the human

system and one to keep up its normal functional activities, is up to the true allopathic system of medicine and a correct knowledge of Anatomy, Physiology, and Materia Medica and a scientific knowledge of surgery—this together with all the advances made in our profession as to Chemistry. Radium, X-rays etc., is all that need to be considered from a scientific standpoint—all other theories are not worth considering.

Ours is the theory that stands square to the Body Politic and the only one recognized in Forensic medicine, or medical jurisprudence.

Ours is the system that guides us in all our hygienic and sanitary measures—all our quarantine and epidemiology work—all state medicine—ours is the system depended upon in all court procedures—the only scientific principles upon which our Institutions, Asylums, Veteran Homes, T. B. Hospitals Etc., are guided and protected and maintained, our public health laws are not entrusted to mere "fads".

All along, at the beginning of scientific medicine—there were various "fads", or "cults" introduced, but none have ever been maintained or stood the test—they have never been recognized by our courts.

We have since the days of Galen and Hippocrates—heard of the various "cults" such as "Homeopaths", "Faith Cures", "Osteopaths", "Users", "Laying on of Hands", "Witch Ticket", "Passing the baby through a horse collar", "Shaking and greasing for grow fast", Christian Scientists", etc., these have come all along down the line, since Grecian Civilization and medicine was taught at the schools of Cos and Cnidus. These "cults" were the cause of the requirement of the Hippocratic Oath, which at that day bound them to the one recognized practice and system of medicine and surgery and governed medical society.

These various "short cuts" to the true knowledge and practice of medicine have cropped out from time to time and are "scabs" to decent scientific principles and

medical knowledge, and while not recognized in state medicine—should be put down. Did the Government enlist these chiropractors to go over seas? Would like to have seen the adjustment they gave to those boys who were gassed. How about the prevention of bodily health which depends both upon the morgonic Cell Salts and the organic Vitininer?

The latest "Cult" that has come upon "the board" and had the cheek to ask state and government recognition is the "Chiropractic."

Now, this, like all other "cults" set up in variance with the true and only scientific knowledge and practice of medicine is in direct variance with all Biblical teachings—Christ said, "They that are whole need no physician, but they that are sick" notice, the Saviour said, "Physician"—He did not say—"they need a chiropractor", or any of the so-called "cure alls"—He meant the true and recognized Physician of His day, of which he was recognized as one of the greatest Himself. He used materials, Spital and Clay to heal the blind man, the healing of the man by the road side was done by remedies—pouring in wine and oil, by the good Samaritan—remedies; not conjury.

Now, I could write a volume to read and to prove our position and its being the only recognized medical profession, but that would take your time and this is sufficient.

I think, I have proven to all unbiased minds, our true position and by a full discussion of the balance of my subject. The relation Legislation should bear to our profession—I want to say to you, that at the past Session of the General Assembly, not only did we have, those who consider themselves "pert cults" in Legislation—advocates of the practice of "chiropractics," but, the lobbies were infested with both men and women who were bent fully on passing a bill to allow a separate board to examine these "cranks" and turn them loose on the

public—Those who appeared before the medical committee of the House, were not only the chiropractors themselves, but they had as members of the House, Legal advocates, championing their cause and numerous witnesses, both men and women, young and old and preachers—plenty. To one observant, as to the character of these witnesses (from a nervous stand-point). They were principally neurasthenics and looked to be those who lacked vitamins, or had torpid livers and were in a morbid and toxic condition—probably from a non functioning of their endocrines.

I was besieged by their advocates, but they would never stay long with me.

One morning a nervous anemic lady, said to me, "I don't believe you understand chiropractics"—my reply was, "no, nor do you, there is not anything but humbuggery to understand"—Her reply was, "I have just come from an adjustment"—"What is the matter with you?" Reply, "I don't know"—"Well, what vertebra did he tell you, was dislocated, for the don't knows"? "Well, he didn't say," "but, he can cure anything, by adjustment."—"you mean to say, he can cure typhoid fever, diphtheria and all such germ diseases, by adjustment of the misplacement of a spinal vertebra?" "yes" "Well, what vertebra is dislocated to cause diphtheria and what one to cause typhoid fever?"—"I don't know, but he can cure it."

Now gentlemen—this sort of "tommy rot" has got as much appropriateness to be tacked on to the true medical profession, as a "street dago foreign fruit vender" has in a Lawyers association, or to plead at the bar.

What is "chiropractic?" In my estimation it is nothing but suggestion and a make believe, that something unusual has or can be done, and it is usually practiced on the hysterical, or the hypochondrical subjects, and mostly those of low mental hygiene.

The study of medical science has been thought of and worked at, by the most

brilliant minds of any and all ages, and they ought to know fully, what is what, and why have *none* of the true followers of all the enlightened teaching in medicine and surgery been taken by these "fads"? They know, there is nothing to them.

And, gentlemen of the South Carolina Medical Association, the point I desire to carefully call to your attention, is this, while the Legislature and government of South Carolina, has in the past favored our system of medicine things and times are changing. Your laws are being changed every session of your general assembly—your Legislature is just what *ability* you send to represent you at each session. The legal profession greatly predominates in every session and other callings are more numerous than ours, so, you see, we must have representation to get recognition. You can't expect much from a small representation and one or two, will not be able probably much longer, to hold things intact; then I admonish you, to look well, to it, that in the coming campaign your profession be urged to come to the front, for both the House and Senate and represent your various sections, in order, that we may obtain the proper Legislation, for the support and maintainance of our profession and state institutions, from a true medical stand-point.

We should work for the relation that Legislation should bear to the true practice of medicine.

We are perhaps somewhat to blame and are criticized by the public for the making of so many specialties; until, as they say, "one can't consult a physician or surgeon, but that he is referred to this and that specialist so that the patient never knows where he is at or when he is done paying his bills. This breeds the patronizing of charlatantry."

Then too, it is a reflection upon us and brings criticism for our medical examining board to turn loose these unprepared enthusiasts upon the public, when they have

turned down on mere technical examinations—men, who have spent four years in the best schools and all the money they had, to obtain an education. However, consistency is a jewel; but these various "cults" will have to be considered and can't be entirely ignored before the next general assembly.

Our Legislation should be consistent and interlocking with all our rural and state medicine, as to rural and city hygienic and sanitary measures—control of epidemics, the maintainance of T. B. Hospitals etc. and I want to say to you, that there are signs of a widening breach and if you desire that our "Holy alliances," shall continue in the pleasant relations, between Legislation and the true medical profession—you must look well to your laurels—you should know, who hereafter, represents you in the General Assembly. So that it will in the future take more than tapping bones of the spinal vertebra to make physical adjustments and cure diseases and press forward with scientific endeavor. If this is not done we may as well, abolish our medical examination board and write a new code of medical ethics.

DISCUSSION

Dr. W. P. Timmerman, Batesburg:

I want to commend Dr. Crosson for his paper. It was not only interesting, but also instructive. I commend Dr. Crosson also for his work in the legislature, where he has served well not only his profession, but his county and state. I move that we thank Dr. Crosson for his most excellent paper.

Motion amended, that the paper be published, and carried as amended.

Dr. E. A. Hines, Secretary, Seneca:

Dr. Crosson was kind enough to ask me to say just a word about his paper, and I want to say that I shall be delighted to send it to the public press according to the motion just passed. I have done this on a number of occasions, and the press uses its own judgment about publishing our papers. Often they do not receive them kindly if it is going to mean some reflection upon them in a

financial way or otherwise, and I am not sure that they will publish this paper.

One tendency of the times, of which Dr. Crosson has spoken, I want to urge upon your attention. The American Medical Association, until the last session, has assumed the attitude of not officially noticing the various cults which have been developing in this country for the last half century or more. But, as Dr. Crosson has pointed out, the time has come to take a different course than simply ignoring them, so a commission was appointed by the House of Delegates in Boston to study the various cults and bring back a report at the St. Louis session as to what we shall do about it. As a result of that study, I am confident that advice will be sent to us, and recommendations for future action. The Massachusetts Society, a few weeks ago, did the same thing. They decided that it is time to study the situation, and if it is menacing to the best interests of the public and of the profession, now is the time for us to act and take positive steps. Last year the President of the United States, through his physician asked for advice in regard to his welfare policy. Never has this been done before. We are going to see that the proper advice is forthcoming. For the first time in the history of American medicine a regular physician sits in the Cabinet, Dr. Hubert Work, as Postmaster-General.

Dr. F. A. Coward, Columbia:

It is probably unknown to most men here what we have to go through within Columbia. It is a very disgraceful situation that we are laboring under at present. The only solution I know of is that suggested by Dr. Weston, that is, to have a medical man in each county or district to see that the proper people are elected to the legislature. It has come to that, that we have to go into dirty politics, if I must use that phrase. If you go into the State House today you are met by men who say that they do not believe in doctors, that they are all politicians, etc., and it is very disagreeable to us who have to live in Columbia. Dr. Crosson has stood up for us nobly. When a man feels ashamed to walk up to his legislator and say that he is a doctor, whether he is advocating public health or fighting chiropractic, it is extremely embarrassing, to say the least. We must let them know that we are old time physicians and show them where we stand.

Dr. W. F. R. Phillips, Charleston:

I would not presume to speak on this subject except for the fact that for the greater part of my life I have been engaged in medical education. I think that we all appreciate the conditions that confront us, but I do not know that we see clearly why these conditions arise. I think that the fault is with ourselves. It is because we do not recognize that behind every one of these cults there is a small grain of truth. They are building upon something that has a small particle of truth in it, and we are ignoring that small particle in our therapeutics. There is not one here but recognizes the value of physical exercise, but what is there in the text books about physical therapeutics? Not a medical school in the country is giving any instruction in it. We are putting in every other sort of specialist, but not one teaches physical therapeutics. Behind all of these cults lies a little reality and if we would adopt the practice of that little reality ourselves we would not have to fight the cults.

Dr. Crosson, closing the discussion:

I want to express my appreciation to the Association for the expressions of approval about my paper. When the Secretary wrote to me and asked me to prepare a paper, it occurred to me that in this age, when so many changes are taking place and so much going on at variance with our old code, it would be a good thing to try to get together some ideas which would cause us to see that we have to look at these things differently.

THE TREATMENT OF CHRONIC LOOSE BOWELS

By F. M. Durham, M. D., Columbia, S. C.

I have purposely used the above humble or homely title because I am fully aware that most of you gentlemen, before me in general practice are frequently approached by many of your patients with merely, "Doctor, I am subject to loose bowels". Therefore I am in hopes that the above title will be of more significance to you than some more dignified or technical one.

I shall not attempt to give you anything

new nor tell you anything that you do not already know. I wish to discuss just such cases of chronic loose bowels as you see almost daily in your routine practice. Therefore, I shall only mention loose bowels which are due to:

1. Diseases of the Stomach.
2. Eliminative Diarrhoea.
3. Dysentery of Mixed Infection.

Of this group of diarrhoea of stomach diseases the gastrogenic is the most important. Gastrongenetic diarrhoea is due to an absence or deficiency of hydrochloric acid in the stomach. This deficiency of hydrochloric acid acts in several ways to upset the intestinal digestion and cause a diarrhoea. First: Pepsin is not functionally active without hydrochloric acid, and protein digestion is retarded. Second: The ingesta fails to get the germicidal effect of the hydrochloric acid, and the growth of fermentative and putrefactive bacteria is in no way retarded or inhibited by the stomach juice. Therefore an undigested fermenting ingesta is emptied into the intestines. Third: In hypochlorhydria and achylia gastrica the stomach frequently empties its content much quicker than it normally should. Therefore this undigested fermenting and putrefying mass is forced into the intestines faster than the intestines can handle it. Fourth: The pancreas fails to receive the stimulus that it should from the hydrochloric acid, and intestinal digestion is again retarded. Digestive fermentations gives way to bacterial putrefying. This fermenting mass irritates the intestinal mucosa, and a diarrhoea sets in to rid the intestine of its unwelcome content.

Gastrogenic diarrhoea can be determined only by an analysis of the stomach juices. To obtain the stomach juice and keep the stomach cleansed of tenacious mucus, the stomach tube is indispensable.

Gastrogenic diarrhoea is best treated by large doses of hydrochloric acid and large doses of bismuth. It is often well to add

resorcin to the bismuth. The diet should be easily digested and finely divided. Frequent small feedings are preferable to three large meals daily, as it prevents the food entering into the intestines in too large amounts at one time. The vegetable proteins, such as dried peas and beans, are contra-indicated so also are cured lean meats. The citrus fruits, owing to their acid juice and freedom from cellulose, are often not only well borne but are at times very beneficial. A bicarbonate of soda enema at a temperature of 110°F or a 25% aqueous solution of the aqueous extract of krameria is very beneficial. The bicarbonate of soda enema is extremely efficacious in gastrogenic diarrhoea, because it is essentially a diarrhoea due to fermentation and putrefaction and the soda acts chemically upon the mucus, and makes a good cleansing agent. The krameria is very mildly an astringent.

The proctoscope does not show any ulcers nor other lesion. It appears to be a simple hypertrophic proctitis. At times there are a very few atrophic areas if the condition is of long standing.

Eliminative diarrhoea is due to the effort of the intestinal mucosa to throw off the toxins or poisons of some systemic or constitutional disease. In some kidney lesions the intestinal mucous membrane excretes urea. Certain drugs will act on the bowels if given by hypodermic. During the process of vicarious excretion or trying to take on the work of another organ, the mucosa becomes inflamed and irritated and a diarrhoea sets up. A fair example of this is pellagra. In this locality pellagrous diarrhoea is the most important of the eliminative group of diarrhoea. Therefore I shall use it as my example.

It is often difficult to differentiate between pellagrous diarrhoea and gastrogenic diarrhoea, as hypochlorhydria or achylia gastrica are common to both. But in pellagra there is the denuded mouth and tongue and the skin symptoms. The

diarrhoea of pellagra is not affected by the administration of hydrochloric acid and bismuth nor by intestinal antiseptics or astringents. Hydrochloric acid and bismuth are very efficacious in the treatment of gastrogenic diarrhoea.

I will not attempt to give you the etiology of pellagra, but I will say, and believe without fear of contradiction, that pellagra should be treated as though it was due to food deficiency. That is, forced feeding is essential in its treatment. The foods should be fresh; salt fish, salt meats and canned goods are not suitable. Local treatment, such as antiseptic and astringent enemas, are of very little if any service. The mucous membrane does not need cleansing. Its vicarious excretion must be inhibited to effect relief from the frequency of the bowel movements.

Anything that causes a protracted irritation of the mucous membrane of the intestines is very apt to cause an ulcer, angulation, adhesion, polypus or other new growth. These small anatomical abnormalities interfere with the calibre of the intestines, and are therefore subject to constant irritation. These points become chronically inflamed and a dysentery results. The infection is a mixed one from the many varieties of intestinal flora. There is no one organism responsible. Amebic dysentery has as its etiology the ameba and its accompanying organisms. It sooner or later however, becomes a mixed infection, as the ulcers develop. John L. Jelks in discussing this very point says: "All authorities now agree that the bacteria of symbiosis and other associated organisms have much to do with the pathogenicity of the ameba The ameba is not the only pathogenic organism to be considered, therefore during an attack of amebic colitis, for the colon bacillus is known to produce many pathological conditions in these cases; so this and other bacillary infections may at any time supercede in importance and virulency amebic infection. Therefore

this fact and possible complications must at all times be kept in mind, and in this emergency met with proper treatment and diet.

Above all things make a digital and proctoscopic examination of all persons suffering with chronic loose bowels, and you will be surprised to know how much pathology is contained within the first few inches of the rectum, which can be relieved by local measures. With the index finger polypi and stricture can be determined.

With the proctoscope angulations, prolapses, ulcers, and new growths can be located and treated. Wherever angulations, prolapses etc., exist there are small pockets and folds of the mucosa which act as receptacles for infection. These angulations, pockets and prolapses can be straightened out and cleansed and held in position. This is done by inserting the proctoscope and gently inflating the rectum to open up folds, pockets, etc., at the same time cleansing the mucous membrane with a cotton sponge held with a long pair of dressing forceps. As the bowel becomes inflated and the proctoscope advances it straightens out the folds, pockets angulations. When the proctoscope has been passed as far as possible, fill it with a 10% sol. of argyrol, and by gentle pneumatic pressure force the argyrol up into the sigmoid and colon, then place two or three cotton tampons in the proctoscope, one at a time, and push them into the bowel with your dressing forceps. Return plunge again into proctoscope and withdraw proctoscope, leaving the cotton in the bowel. The cotton keeps the angulation, pockets, folds, etc., straightened out and causes a retention of the argyrol for from three to twelve hours. Ulcers can be cauterized and treated through the proctoscope.

Examine the mouth. All diseased teeth and gums should receive careful treatment to prevent a constant source of infection entering the digestive canal and to insure perfect mastication. If the stomach shows

a hypermotility, small frequent feedings are necessary to prevent over loading the intestines. If a subacid condition exists hydrochloric acid is indicated. The ameba is perhaps more frequently present in chronic diarrhoea than it is in chronic dysentery. Use emetine in every case of chronic loose bowels. It is wise to examine the stools of every person with deranged bowels for the ameba, but emetine should be given even if the ameba can not be found, for at times it is very difficult to demonstrate. Emetine should be given in doses of one to two grains daily for six days. If improvement follows repeat the emetine several times at three weeks intervals. A teaspoonful of bismuth subnitrate every three or four hours cannot do any harm, and may prove to be very beneficial. An occasional small dose of castor oil to cleanse out the pockets and angulations may at times work wonders.

We physicians through carelessness very often direct our only treatment toward controlling the frequency of the bowel movements. We give a prescription containing an opiate astringent, or intestinal antiseptic. This eases our conscience and perhaps satisfies the sufferer for a while. We seem to forget or lose sight of the cause of the diarrhoea or dysentery. We treat loose bowels as though it was a disease itself. Our reason for this careless interpretation of rectal symptomatology is because proctology has not been taught in our medical colleges as it should have been. No stress was placed on anything rectal during the medical education of men of my age. I personally had never seen a proctoscope until after I had been practicing medicine for several years.

GASTRIC AND INTESTINAL FLATULENCE; A DIGESTIVE BUGBEAR

By George M. Niles, M. D., Atlanta, Ga.

To those physicians who pay special attention to digestive diseases the subject of flatulence, either gastric or abdominal, is one of perennial interest. Few there are affected with any of the various disturbances of the digestive tract, who do not complain of gaseous accumulations, plus all the pains and penalties incident thereto.

A clear understanding, therefore, concerning the real causes and significance of this gas will certainly prove of interest to many readers.

GASTRIC FLATULENCE

Before concluding that an excess of gas is being produced in the stomach, it is well to exclude the possibility of air swallowing or aerophagia. This condition is by no means uncommon, but is often wrongly diagnosed.

When this gastric flatulence occurs in neurotic people, when the eructations are frequent, explosive, and without much taste or odor, the trouble may generally be ascribed to aerophagia or unconsciously swallowed atmospheric air. Bouvert explains the modus operandi as being due to a clonic spasm of the pharynx, while Ewald contends that it is produced by contractions of the muscles of the neck. In differentiating aerophagia from gastrectasis, it must be remembered that in the latter condition the eructations are gaseous in character, of a decided odor, and contain sulphuretted hydrogen, or marsh gas. Aerophagia should also be distinguished from the burning eructations of hyperchlorhydria, as well as real fermentation, as is sometimes the case in achylic stomachs.

Vanderhoof records a case of aerophagia in a hysterical subject, where she belched over 5,000 times in 24 hours, and the amount of air eructated being measured,

was found to exceed 200 liters. The writer had one nervous lady under observation, who reported that she had taken trouble to count her eructations, and that they occurred 141 times after a very light meal of tea and toast. It is well, therefore, to suspect aerophagia in nervous individuals who belch freely and "to order", and who volubly complain about the terrific discomfort produced by the presence of this air in their stomachs.

True gastric flatulence is present, and the same general cause exists in most—we might almost say in all forms of gastric disorders. We should distinguish between the cases in which the gas is produced as a result of *fermentation*, or stagnant gastric contents, and those in which no such fermentation is taking place. In the former group the stomach will be dilated, vomiting will almost certainly be present, and the examination of the gastric contents will frequently show the presence of sacinae and yeasts. The emptying time of the stomach also is greatly prolonged. True fermentation follows pyloric stenosis, either simple or malignant, especially where the free hydrochloric acid is diminished or absent.

Natural fermentative flatulence occurs in almost all forms of functional disturbance of the stomach, but it is especially prominent in cases of gastric atony. In that case there will be a well marked splash over the gastric field some hours after a meal, but without any evidence of actual dilatation of the organ. This can easily be demonstrated where a fluoroscope is available.

Flatulence is not an uncommon symptom in emphysema of the lungs, and in the presence of cardiac disease, especially when due to degeneration of the heart muscle. In angina also, flatulence may be a prominent symptom, and in that case there seems a tendency for it to come on from exertion, and to be accompanied by the characteristic anginal pains.

INTESTINAL FLATULENCE

This may be either acute, as in meteorism or post-operative states, or chronic, which is intestinal flatulence proper. When there is excessive flatulence it may suggest either intestinal obstruction, or extreme atony of the intestines. Sometimes in obstruction, minus the atony, coils of the intestines are visible and peristaltic contractions are easily to be seen. In cases of intestinal fermentation, either constipation or diarrhoea may be present. A microscopic examination of the stools is often quite helpful in elucidating the nature of the fermentative process. When there is evidence of muscle fibers it would suggest protein fermentation or putrefaction, while an excess of starch cells would indicate carbohydrate fermentation.

A most annoying feature due to the neurosis, is the passing of air through the intestines, and the accompanying rumbling denominated borborygmus. This increases under emotional stress, like aerophagia, and the anxiety over it increases the flatus. Old men seldom complain of it to their physicians, but middle aged and elderly women find it a keen source of embarrassment. The older female sufferers are often stout, with relaxed and incompetent abdominal walls, so that the empty intestines do not stick together as they should, but rather tend to fall apart, leaving spaces, between which the atonic intestinal walls "balloon" out, and this favors an accumulation of gas. Often after these patients have been exercising to the point of fatigue, and sit down in a warm room, the expansions of air in the intestines quickly leads to loud rumbling there. These explosions are quite common with elderly people in cold weather, and the odor of the flatus is but slightly offensive.

In young women, who suffer with flatulence, the borborygmus very often makes them so nervous and leads to such dread that it hinders their participation in

social life; and usually their association with the public causes them the most poignant mental suffering. Some young people complain of rumblings in the intestines whenever more than four hours have passed since their last meal. This phenomenon is most likely to manifest itself when they are nervous, or excited. Dread and fear play a large part in this nervous rumbling, and it is probably due to an exaggeration of peristalsis.

The administration of carminatives, the correction of digestive faults, the regulation of the diet, exercise, hygienic precautions, and the avoidance of constipation, will largely do away with flatulence. With the neurotic, however, moral suasion, encouragement, and endeavors to convince the patient that composure and quietude will stop the drawing in of air, while the gasses already there can easily be absorbed—such suggestions will greatly aid this embarrassing and disturbing state.

Let it be impressed upon the patients that while gastric and intestinal flatulence may be annoying and disquieting, they are seldom of serious import, except in the presence of marked *organic* pathology, where the slightest deviation from normal may spell disaster.

As indicated in the title of this paper, ordinary flatulence is more of a bugbear than a menace.

CHOLECYSTITIS

By T. B. Reeves, M. D., F. A. C. S., Greenville, S. C.

Since the stomach, duodenum, gall bladder, liver and pancreas have practically the same embryologic anlagen and the same functions to perform in maintaining life, that is, the preparation of food for assimilation, it seems natural to suppose that when one is diseased the others may be sympathetically affected.

This is well borne out by the fact that when one of these organs is diseased, the patient will usually consult his physician and give "stomach trouble" as his chief complaint.

All pathologic conditions of the gall bladder, including stones and primary malignancy can be traced to infection. Malignancy by extension cannot be considered gall bladder disease. If the infection is severe, an empyema of the gall bladder will probably have to be dealt with; if mild in character a chronic cholecystitis develops which tends to cause a stagnation of bile in the gall bladder. This with a nucleus of bacteria or tissue detritus predisposes to the deposition of cholesterol, bile and lime salts for the formation of gall stones. Gall stones do not form in a normal gall bladder, and I might say that primary malignancy does not develop without the presence of stones.

It is entirely possible that infecting organisms may reach the gall bladder by means of the bile from the liver or through an ascending infection along the bile duct from the duodenum, but with our present knowledge of hematogenous infection and elective localization, as shown by Rosenow, it is rather conclusive evidence that most if not all infections of the gall bladder are through the blood stream. The portal of entry is of no importance in the production of the symptomatology, which is our chief consideration for on it alone the diagnosis is made.

Frequently there arises serious doubts as to the sufficiency of certain symptoms to warrant operative procedure and at times similar difficulties are experienced by the surgeon at the operating table to tell for certain whether the gall bladder is diseased or not. With the hope of adding to our ability to make a correct decision under such circumstances, I shall consider the possible means by which this may be acquired. On account of the variegated symptoms it requires better judgment than

in connection with the appendix. The frequency in which the appendix is removed with such minor symptoms would be inexcusable were it not for the frequency that individuals developed under most unfortunate circumstances an acute fulminating appendicitis. This is not true in the gall bladder. It is most unusual that any condition which has gone beyond the point of successful surgery develops in the gall bladder out of a clear sky. In practically all cases, the symptoms exist for a long time before any serious condition develops. It is quite evident, therefore, that the one thing we wish to do is to establish, if possible, syndroms or groups of syndroms under which it is advisable to recommend operation.

Cholecystitis occurs in three distinct types of cases: first the mild; second the more protracted; and third the essentially chronic.

1. In the mild cases we have the appearance of upper abdominal discomfort, gas pressure, belching and sometimes sour regurgitation, but no pain. This distress usually comes on quite promptly following a hearty indigestible meal and passes off by the next meal. These symptoms are not daily, regular or periodic and are not severe, but if the distress is well defined it is just as characteristic of cholecystitis as the typical gall stone colic is characteristic of gall stones.

2. The more protracted and essentially chronic type gives the greatest difficulty in diagnosis. The symptoms are prolonged for several days or weeks with an interim of freedom. These patients have the same symptoms as those in the first group except they are more severe and last over a longer period of time. The predominating symptom, however, and as a matter of fact the most frequent is pain. In approximately 60 per cent of cases the pain is characteristic in its character, its situation, its severity, and its time, while in the other 40 per cent it is not so severe in character,

yet it is sufficiently characteristic in its various manifestations to justify a suspicion of cholecystitis. Gastric distress is the second most common and important symptom. The chief disturbance is the accumulation of gas in the stomach with periods of prolonged belching and as a rule the distress is relieved to a great extent by belching. Nausea and vomiting occurs in approximately 50 per cent of cases and the spells of nausea and vomiting are not necessarily associated with the attacks of pain. The pain is in the upper abdomen, usually the right side and sometimes with a posterior radiation. It may be dull and boring, or full and bursting; the patient is unable to breathe deeply, particularly if the pain is severe. Again the pain may be sudden and colicky, simulating gall stones and yet at operation none can be found. Tenderness with residual soreness over the gall bladder occurs in a high percentage of cases, of frank cholecystitis without stones and is an important point in the differential diagnosis from lesions of the stomach and duodenum. The symptom of jaundice is very interesting from many standpoints, in that it occurs in approximately 20 per cent of cases with gall bladder disease. As a diagnostic point, however, it is not so important, nor can a diagnosis of gall bladder disease be made on the presence of jaundice alone. The symptoms of gall stone attacks are very distinctive and I shall not describe them here, but I might say that we often find a gall bladder full of stones and the patient has no symptoms. Attacks of colic followed by jaundice usually means stones in the common duct.

3. The specific symptoms in this group are essentially the same as in the two previous groups, but the patient is worn out by them. On account of the continued gastric distress the patient refrains from food for relief, or there may be severe vomiting and nutrition is lessened. There is local tenderness over the gall bladder area, this being due to the gall bladder itself or to a

resulting local peritonitis. These patients are usually not seen until some complication has arisen, their old symptoms having changed for the worse and they are forced to seek medical aid.

The diagnosis of gall bladder disease depends upon a careful history and the interpretation of symptoms. Differential diagnosis is assisted by exclusion of stomach or duodenal lesions by X-ray examinations. Analysis of the gastric contents will show low acid values as a rule, but the rule has many exceptions. The secretions may be normal or hyperacid. Approximately only 5 per cent of the people with gall stones have the kind that will cast a shadow with the X-ray. Stones in the kidney or other surgical conditions in the kidney can be excluded by cystoscopic examination or X-ray or both.

A high percentage of cases of cholecystitis is accompanied by a chronic pancreatitis and it is a significant fact that cholecystectomy relieves the pancreatitis. This is best explained by the physiological effects of the removal of the gall bladder. Judd and Mann have shown that there is a dilatation of the common and hepatic ducts and a relaxation of the sphincter muscle of Oddi in the ampulla of Vater. Such a condition would permit continuous and free drainage from the bile and pancreatic ducts. It seems to me that Lyons method of drainage is founded on good principles and should be worth while in many cases. It brings about temporarily a physiological condition which is permanently produced by cholecystectomy; that is, a relaxation of the sphincter muscle of Oddi and a free drainage of bile and pancreatic juice.

Patients with the first group of symptoms which I described will be better off if treated by medical measures, while those in the second and third groups should be considered surgical. Of course, the general condition of the patient must be taken under serious consideration and determined to be such that they want be put to a greater risk through operative measures than from the disease itself. The question of jaundice is of considerable importance in one's decision as to surgical intervention. Other things being equal, if the jaundice is improving it is best to wait. If surgical intervention is demanded and jaundice is increasing with no possibility of a decrease, the patient must be protected from the hemolytic tendencies of the blood. There is probably no better way of doing this than by a blood transfusion the day before operation and one immediately following operation.

Surgical intervention, in the treatment of severe diseases of the gall bladder, will at the hands of a good surgeon cure approximately 95 per cent of cases. On opening the the abdomen in cases of suspected cholecystitis, one should make a careful examination of the gall bladder both by inspection and palpation. The walls may be visably thickened or changed from the normal bluish to a whitish color. On palpation the walls may be thickened, or there may be markedly enlarged lymph nodes along the cystic and common ducts and finally a sign which I have always believed to be a most important one, namely, inability to express bile from the gall bladder by compression. The operation of choice is cholecystectomy.

UROLOGY

MILTON WEINBERG, M. D., Sumter, S. C.

The first clinical reports on this condition were made about the latter part of the sixteenth century. Observers at that time described the symptom-complex of the disease to be the same as seen in some of the cases now. Movable kidney was seen in undernourished patients, usually women, with renal pain, gastro-intestinal disturbances, and the various phenomena of neurasthenia.

Surgical interference was first carried out by Martin in 1878. He did nephrectomy, which procedure now must be condemned. In 1881, Hahn, of Berlin, performed the first operation of suspension for movable kidney. Since that time this operation with various modifications has been done with success and failure. Edebohl's strongly advocated surgical interference and offered a technique for operation. Kelley, in this country, later on took up the work believing that suspension was the proper line of treatment in many of the cases and has reported some very satisfactory results. Glenard, however, thought the condition to be practically always an accompaniment of a general visceroptosis and not a condition in itself; and he did not believe that nephropexy had any special value.

The terms movable kidney and nephrop-tosis are synonymous. The term floating kidney is also sometimes used but is intended to refer to a kidney that is practically free lying under the abdominal wall and surrounded by a mesentery or mesonephron.

Movable kidney implies an abnormal mobility, besides the normal mobility of the kidney that is observed during respiration.

For many years up until a few years

ago nephropexy was practiced a great deal but was successful in a small percentage of cases. This failure to relieve many by operation was so conspicuous that the operation had almost been abandoned. The reasons for such large number of failures are now obvious. Just because the kidney was more or less freely movable in itself should not have been taken as sufficient cause for suspension of the organ. Nephropexy now with modern urologic diagnostic methods to ascertain whether or not such operations be done is under these circumstances a very valuable procedure. The operation has again assumed a place of great importance for the relief of many of those cases of pain of renal origin due to abnormal mobility alone with its accompaniment of kinks of the ureter, with or without hydronephrosis, also symptoms following torsion of the renal pedicle, and those that may be caused by aberrant blood vessels. Ureteral catheterization with pyelography, ureterograms is quite necessary. The technique of making the x-ray pictures with the aid of thorium nitrate or sodium bromide solution in the pelvis of the kidney and ureter is very important. In many instances by the taking of pictures while the patient is in expiration and another one after deep inspiration, a kink of the ureter can be demonstrated when in no other way it would be seen.

There have also been improvements in the technique of operation which is very essential. More of the ureter than formally is dissected free and the kidney itself is also well taken out of its bed by dissection so that it may be replaced wherever desired. In this way, adhesions will more

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PUBLIC HEALTH

LEON BANOV, M. D.,
Health Officer, Charleston County,
Charleston, S. C.

THE VITAMINS

Medical men like other groups have their fads and fashions. An unusual discovery, or an unusual presentation of an old discovery will promptly start a wave of enthusiastic controversy both pro and con—that will gradually wane and finally die out in favor of a more recent topic of discussion.

The vitamins seem to hold the center of the stage at present; and judging by the glaring headlines of newspaper advertisements and the dazzling electric signs of the commercial exploiters, these elusive and intangible, but highly important elements of nutrition are very much in the limelight.

Notwithstanding the fact that several hundred manufacturers are selling as many different forms of vitamin—containing nostrums, each having proper ties—if we were to believe the statements of these charlatans—that range from the beautifying of ugly women to the rejuvenation of senile, decrepid men; only three vitamins are recognized by scientific workers as demonstrable and accepted as so. They are familiarly designated as vitamins A, B, and C.

Vitamin A is a fat soluble substance, apparently necessary for normal growth and nutrition, chiefly found in butter and eggs, but also found in cod liver oil and a few other fatty substances.

It is the most recently discovered of the three types, and was demonstrated in 1913 by McCollum and Davis and also by Osborne and Mendel, who showed that animals placed on food mixtures identically alike excepting for the fat elements either thrived or failed to thrive, depending on—

whether butter fat was given or some other fatty substitute.

The latter named workers also demonstrated that animals deprived of this fat soluble vitamin were subject to a conjunctival disease known as Xerophthalmia.

Vitamin B is a water soluble growth promoting substance that is considered by some to be identical with the anti-neuritic element found in rice millings, and this is the vitamin with which McCollum did such striking work upon rats, demonstrating the fact that the young animals, when deprived of this substance, quickly cease to grow, begin to lose weight and develop a condition of general weakness, which may sometimes include symptoms of polyneuritis.

It will be recalled here, that Beriberi is caused by a diet deficient in this vitamin; and recent work by Cowgill and Mendel have shown that dogs may experimentally be made to develop a condition strongly resembling Beriberi, by eliminating the necessary vitamin from their diet.

Vitamin C is the Antiscorbutic element of food, and may be found in fresh vegetables and fruit.

Its use in curing and preventing scurvy is very well known to the average practitioner, although its importance has never been fully appreciated—due perhaps to the fact that few persons trouble themselves with supervising the conditions under which these foodstuffs are given.

It must be recalled that vitamin C is partially, and in some instances almost entirely destroyed by cooking.

Reviewing then, our knowledge of the vitamins, we find that milk—whether it be raw, pasteurized, condensed or powdered

—is the cheapest and most important source of vitamins A and B; and that fruits and fresh vegetables will supply the necessary vitamin C.

While we have always suspected that a diet in order to be an all-round good dietary should include milk, fruits and

fresh vegetables, we can now eat and prescribe these foodstuffs with a feeling of assurance that we are making use of the very latest scientific knowledge regarding vitamins.

Such are the wonders of science.

DERMATOLOGY AND SYPHILOLOGY

J. RICHARD ALLISON, M. D., Columbia, S. C.

A SYMPOSIUM ON CANCER OF THE SKIN HELD AT A STATED MEETING OF THE NEW YORK ACADEMY OF MEDICINE.

FROM THE NEW YORK MEDICAL JOURNAL AND MEDICAL RECORD OCTOBER 1922.

This was a meeting of the experts of the country on the treatment of skin cancer and the views here stated can well be taken as the last word on the best methods of dealing with the condition.

Dr. Burton J. Lee in discussing the treatment of cancer of the skin from the view point of the surgeon said that he considered it the duty of the surgeon to honestly investigate the results of the treatment of cancer of the skin by radium and X-ray with a thoroughly open mind. On the other hand the Radium and X-ray workers too often exhibited an over enthusiasm and undue optimism of the results to be obtained by Radium or X-ray.

Concerning his experience with Melanomata, Dr. Lee said that in the past six years he had seen fifty cases none of which had been treated successfully either by Surgery, X-ray or Radium. Squamous celled epithelomata of the life where there is no lymph node enlargement should be treated by X-ray and Radium; the results

are as good or even better than surgery and do not leave a scar where the glands of the neck are involved. The glands should be removed by surgery and the whole area rayed, following the operation. Basal celled epithelioma metastasizes slowly and remains a local condition for an exceedingly long period. Here again on account of the disfiguring scar and the possibility of the recurrence in the scar he prefers X-ray and Radium when used properly.

Dr. Pfahler showed many pictures of cases he had cured by a combination of electrocoagulation and X-ray. He stresses the importance of treating all pre-cancerous dermatosis as well as frank cancers by this method. Many authorities believe it wrong to molest the so called pre-cancerous conditions. He contends however that this stage is the acceptable time for treatment. Even in cases of melanomas which many believe should be let alone he states that he would not himself leave a pigmented mole on his body a day longer than he could help, but would destroy it with electrocoagulation, and then apply two erythema doses of X-ray. He had in no instance failed with such treatment; whereas when patients had had such lesions excised metastases had always developed that could not be checked. Two great advantages of this method are 1st. that it seals

the blood vessels; 2nd. it forms a zone of heat beyond the actual area of destruction in which cancer cells would be destroyed.

Dr. Higman discussed the advisability of the term pre-cancerous being used to designate conditions that sometimes led to cancer. He believed that probably all cancers arise in healthy skin, but have an intermediary stage clinically unrecognizable as cancer, unless the idea of Cohnheim was correct that they were all due to congenital anomalies. He classifies the so-called pre-cancerous dermatoses as to possible origins under five heads as follows:

A. Congenital anomalies; (1) Pigmentary hairy and vascular nevi; (2) Cypts.

B. Infectious; (1) Tuberculosis especially lupus vulgaris; (2) Syphilis especially the scars and Leucoplacia.

C. Irritations; (1) Mechanical such as smoking and burns. (2) Actinic Rays such as X-ray, Radium and sunlight; (3) Clinical irritants. (4) Pre-existing dermatoses such as Seborrhoea Psoriasis and Lupus Erythematoses.

D. Regressive changes such as senile keratoses.

E. Unclassified which includes such diseases as xeroderma pigmentosum.

MINUTES

MINUTES OF HOUSE OF DELEGATES, 1922, CONCLUDED

REPORT OF COMMITTEE ON EFFICIENCY AND STANDARDIZATION OF HOSPITALS

The committee on the Standardization of Hospitals recommends to the Society that an effort be made to establish more direct communication between the outgoing and the incoming members of the committee from year to year.

Otherwise the work accomplished by the outgoing committee runs a great risk of being lost when the new one assumes its duties and responsibilities.

This can best be accomplished perhaps, by appointing certain members who are particularly interested in this work, to serve for more than one consecutive year.

The Society should encourage county or State Hospital building, equipment and maintenance. Especially is this true as the monthly or united maintenance is quite considerable in completed hospitals of any size.

It is no more necessary or reasonable why one man, or a few, should be expected to operate and maintain an institution for the public, than it is to expect a lawyer to operate and maintain the county Court House, or a

Pastor to operate and maintain the church for his congregation.

All hospital authorities should recognize that the patient is the most important person beneath the institution's roof, and it is the duty of the hospital to give to the patient its maximum benefits and cares.

There are more people needing scientific medical investigation and treatment than need surgical attention.

It seems to us that heretofore too much stress has been laid on the surgical resources of almost all institutions, especially is this true in the small towns and communities.

Classification of hospitals has come, and apparently has come to stay, whether we wish it or not.

Hospitals should be required to maintain a record system and each patient's record should be carefully compiled, and progress notations made from time to time.

Internes are of great assistance in seeing that the attending Physician's orders are properly executed and that the hospital records are kept more exact.

And it behooves the Societies to recommend that wherever at all practical the system of Internes should be instituted.

A well equipped laboratory is another requisite of hospital perfection and the doctors should support it more freely than they do at the present time.

The doctors should make a vigorous effort to have the hospital authorities equip their institutions with one, and to secure the services of an individual thoroughly capable of doing the technical work.

In like manner a modern X-ray equipment is of the utmost importance, but only so provided an experienced Roentgenologist is in charge of it.

The best equipped X-ray outfit in the world with an experienced operator, and interpreter, is like a street car without a trolley, or a fish without a fin.

It also seems to us that the Society should outline a large general plan of hospital operation, equipment and maintenance, and then seek to have each institution approach this standard so far as practicable.

Respectfully submitted,

S. O. Black, Chairman.

NEW BUSINESS

Dr. W. F. R. Phillips submitted a motion calling for the appointment of a special committee, to be known as the Reference Committee, to take the reports dealing with matters of policy and procedure, adjust them, and report next year, so that action may then be taken. The motion was seconded and carried without discussion, and the President appointed, as members of the Committee, Dr. Phillips, as chairman, Dr. G. A. Neuffer, of Abbeville, and Dr. C. B. Earle, of Greenville.

The Secretary, moved that the officers be permitted to revise, for the ensuing year, the list of committees not mentioned in the constitution and by-laws, taking off the list, those committees which have completed their work. This motion was seconded and carried, without discussion.

Dr. William Weston moved that the President appoint each year a member from each county society in the State to be a member of the Legislative Committee of the State Association, to assist in securing the necessary appropriations by the State Legislature for the State Board of Health and the State Medical College. This motion was seconded and carried, without discussion.

An invitation was extended by Dr. W. F. R. Phillips to the Association to hold its next annual meeting (the seventy-fifth) in the city of Charleston. Dr. D. M. Crosson moved that the invitation be accepted the motion being duly seconded.

The report of the committee on the Recommendations of the Secretary was read by Dr. C. B. Earle. The Secretary then submitted several other invitations which had been extended Dr. H. M. Stucky, of Sumter, invited the Association to meet in that city in 1923. The question of the next place of meeting was then put to vote, and Charleston was decided upon, almost unanimously.

The President called for the delegates from Georgia, and Dr. Crosson presented Dr. William A. Mulherin, of the Medical Department, University of Georgia, who spoke briefly as follows:

"I was not appointed as a delegate, so I did not rise. Dr. Mikell said that he was much pleased with his visit to the Georgia State Medical Society, and I think that feeling was mutual. We thought that you sent a crackerjack man to represent you. We are anxious for that close relationship between the Societies to continue. I hope that the other delegates will arrive, but, if not, it will be a pleasure to me to serve." The President: "We shall be glad to have you and the others also."

ELECTION OF OFFICERS

Dr. G. A. Neuffer nominated for president Dr. C. Fred Williams, of York County. Seconded by Dr. W. R. Wallace.

Dr. A. L. Black nominated Dr. William A. Boyd, of Columbia. Seconded by Dr. S. E. Harmon.

Dr. W. C. Black nominated Dr. L. O. Mauldin, of Greenville. Seconded by Dr. C. B. Earle.

Dr. F. H. McLeod nominated Dr. A. E. Baker, of Charleston. Seconded by Dr. E. N. Dibble.

After the fifth ballot, Dr. Frank Lander nominated Dr. J. R. Young, of Anderson.

After the sixth ballot Dr. R. A. Marsh nominated Dr. D. M. Crosson, of Leesville. Dr. Neuffer made the point that Dr. Crosson was a delegate, and moved that the nominations be closed, which motion was carried.

Dr. Williams was elected President upon the eighth ballot, the election being made unanimous upon motion of Dr. S. E. Harmon.

Dr. Samuel Lindsay, of Winnsboro, was nominated as First Vice-President by Dr. Hamilton, and was unanimously elected. Dr. J. R. Miller, of Rock Hill, was nominated as Second Vice-President by Dr. Whitten, and was unanimously elected.

Dr. E. A. Hines was nominated to succeed himself as Secretary-Treasurer, and was unanimously elected.

The following Councilors were re-elected to succeed themselves.

Second District—Dr. S. E. Harmon.

Fourth District—Dr. L. O. Mauldin.

Sixth District—Dr. C. R. May.

Eighth District—Dr. L. A. Hartzog.

Dr. J. S. Matthews, and Dr. Baxter Haynes, of Spartanburg, were nominated to succeed

themselves as members of the State Board of Medical Examiners, and were unanimously elected.

Dr. E. M. Whaley was elected to succeed himself as ophthalmologist on the Board of Optometry.

Dr. S. E. Harmon was appointed by the President to present the incoming President, Dr. Williams. Since Dr. Williams was not present, the meeting adjourned.

BOOK REVIEWS

LECTURES ON DIETETICS. By Max Einhorn, M. D., Emertus Professor of Medicine at the New York Post Graduate Medical School and Hospital; Visiting Physician to the Lenox Hill Hospital, New York. 12mo of 244 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$2.25 net.

THE PROPAGANDA FOR REFORM In Proprietary Medicines. Volume No. 2. Reports of the Council. Contributions from the laboratory. Journal Contributions Proprietary Products. Miscellany. Press of the American Medical Association, 535 North Dearborn St. Chicago, Ill.

OBSTRETRICS FOR NURSES. By Joseph B. DeLee, M. D. Professor of Obstetrics in the Northwestern University Medical School, Chicago. New (6th) Edition, Entirely reset. 12mos. of 525 pages, with 245 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Cloth \$3.00 net.

THE THYROID GLAND. Clinics of George W. Crile and Associates. Edited by Amy F. Rowland. With 106 Illustrations. W. B. Saunders Company. Philadelphia, and London. 1922.

THE MEDICAL CLINICS OF NORTH AMERICA. Volume 6. San Francisco Number. Number 2. Among the contributions are the following, Dr. Albion W. Hewett, Stanford University Medical

School, "Paroxysmal Tachycardia, A case where Quinidin Lessened the Frequency of Attacks."

Dr. Marshall C. Cheney, University of California Hospital, "Intestinal Protozoa." Dr. Langley Porter, Department of Pediatrics, University of California Medical School Dermatopolyneuritis (Thursfield Pattersda,) Acrodynia (Weston), Erythredema (Swift). Published Bi-Monthly by W. B. Saunders Company. Philadelphia and London.

THE SURGICAL CLINICS OF NORTH AMERICA. Volume 2. Southern Number. Number 5. October 1922. Among the contributions are the following, Dr. Rudolph Matas, Charity Hospital, New-Orleans. "A rare Anomaly Found in a Congenital Right Inguinal Hernia; a Tubular Diverticulum or Prolongation of the Right Seminal Vesicle Extending Into the Scrotum as a Component of the Spermatie Cord."

Dr. J. Shelton Horsley, St. Elizabeth's Hospital, Richmond, Va., "Duodenal Ulcer."

Dr. Stuart McGuire, St. Luke's Hospital, Richmond, Va. Case 1, "Deformity of Neck Treated by Transplantation of Fat." Case 2, Congenital Hypertrophic Pyloric Stenosis". Case 3, "Exophthalmic Goiter." Dr. Hubert A. Royster, St. Agnes' Hospital, Raleigh, N. C. (For Colored Patient Only) "Proof of Cure in a Case of Tuberculous Peritonitis." "Lipoma of the Politeal Space: Differential Diagnosis." "Tumor Springing from the Under

Surface of the Liver." "Epithelioma and Sebaceous Cyst of the Scalp Side by Side." Published Bi-Monthly by W. B. Saunders Company. Philadelphia and London.

BRONCHOSCOPY AND ESOPHAGOSCOPY.

By Chevalier Jackson, M. D., Professor of Laryngology, Jefferson Medical College, Professor of Bronchoscopy and Esophagoscopy, Graduate School of Medicine, University of Pennsylvania. Octavo of 346 pages with 114 illustrations and 4 color plates. Philadelphia and London: W. B. Saunders Company. 1922. Cloth \$5.50. net.

Dr. Jackson is a master in this field, and is so recognized. The illustrations are invaluable to the student of the subject.

THE ELEMENTS OF SCIENTIFIC PSYCHOLOGY.

By Knight Dunlap. Professor of Experimental Psychology in Johns Hopkins University Baltimore; Author of "Mysticism, Freudianism and Scientific Psychology," "Personal Beauty and Racial Betterment" etc. Illustrated. Price \$3.50. C. V. Mosby Company, St. Louis, U. S. A. 1922. Price, \$3.50. There is so much that is hazy in the domain of Psychology so that a scientific contribution from Johns Hopkins University will be received with interest by the profession generally.

PHYSICAL DIAGNOSIS. By W. D. Rose, M. D., Lecturer on Physical Diagnosis and Associate Professor of Medicine in the University of Arkansas; Visiting Physician Little Rock City Hospital, Baptist Hospital, and St. Vincent's Infirmary, Little Rock, Ark. Third Edition. Three hundred and nineteen illustrations.

C. V. Mosby Company, Publishers, St. Louis, U. S. A. 1922. Price, \$8.50. This book has been greatly enriched by numerous illustrations. The section on the circulatory system has been re-written, and altogether the work is very creditable.

PHYSIOLOGY AND BIOCHEMISTRY IN MODERN MEDICINE, By J. J. R. McLeod, M. D., Professor of Physiology in the University of Toronto, Toronto, Canada; Formerly Professor of Physiology in the Western Reserve University Cleveland, Ohio. Assisted by Roy G. Pearce, A. C.

Redfield, and N. B. Taylor and others. Fourth Edition, with 243 illustrations, including 9 plates in colors. C. V. Mosby Company. St. Louis, U. S. A. 1922. The price of the book is \$11.00. The whole subject of Biochemistry in its relations to the practice of medicine has been of intense interest to the profession in recent years, and the author has contributed very largely to a clearer conception of the subject.

CLINICAL MEDICINE, Tuesday Clinics at the Johns Hopkins Hospital. By Lewellys F. Barker, M. D., L. L. D., Professor of Medicine, Emeritus, Johns Hopkins University; Visiting Physician to Johns Hopkins Hospital, Baltimore, Md. Octavo of 617 pages. illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$7.00 net.

Dr. Barker is well known as chief of one of the greatest medical clinics in the world, and he has given us in this volume a wide range of cases worked out along group diagnosis lines, and participated in by the students of Johns Hopkins Medical School. The book itself is attractive in makeup from the publishers standpoint.

THE EVOLUTION OF PUBLIC HEALTH NURSING. By Annie M. Brainard. Editor of "The Public Health Nurse," Lecturer on Administration of Public Health Nursing in Western Reserve University. 12mo of 454 pages. illustrated. Philadelphia and London: W. B. Saunders Company, 1922. Cloth \$3.00 net.

In very recent years public health nursing has assumed the attitude of a speciality, and the writer of this book has covered the fundamentals of the profession in an admirable way.

THE TREATMENT OF FRACTURES: With Notes Upon A Few Common Dislocations. By Charles L. Scudder, M. D., Assistant Professor of Surgery at the Harvard Medical School. Ninth Edition. Revised. Octavo volume of 749 pages, with 1252 illustrations. Philadelphia and London: W. B. Saunders Company, 1922. Polished Buckram, \$8.50.

Scudder is a classic with both medical students, and the practicing physician and

surgeon. A special chapter on dislocations has been added, and much new material from the X-Ray standpoint.

DISEASES OF WOMEN. By Harry Sturgeon Crossen, M. D., F. A. C. S. Clinical professor of Gynecology, Washington University Medical School, and Gynecologist in chief to the Barnes Hospital, and the Washington University Dispensary; Gynecologist to St. Luke's Hospital; Consulting Gynecologist to the Jewish Hospital; St. John's Hospital, and St. Louis Maternity Hospital; Fellow of the American Gynecological Society, and of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons. Fifth edition, Revised and enlarged. Nine hundred and thirty-four engravings, including one color plate. C. V. Nosby Company, Publishers. St. Louis, 1922. Price, \$10.00.

The author has taken advantage of resetting, to completely revise the book. This revision includes extensive sections on radium and X-ray. As usual the illustrations are profuse and cleverly done.

A MANUAL OF PHARMACOLOGY and its applications to Therapeutics and Toxicology. By Torald Sollmann, M. D., Professor of Pharmacology and Materia Medica in the School of Medicine, of Western Reserve University, Cleveland. Second Edition, entirely Reset. Octavo of 1066 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth. \$7.00 net.

In rapid advance of medicine and surgery, Pharmacology and therapeutics have not kept pace with the more spectacular studies, but such a contribution as Professor Sollmann's will go far toward maintaining these subjects in their proper scientific relations to the superstructure of medicine referred to above.

THE MEDICAL CLINICS OF NORTH AMERICA (Issued Serially, one number every other month). Volume VI Number 1 July 1922. By St. Louis Internists. Octavo of 203 pages and 61 illustrations. Per clinic year (July 1922 to May 1923). Paper \$12.00; Cloth, \$16.00 net. Philadelphia and London: W. B. Saunders Company.

Among the interesting contributions to this volume are the following: Clinic of Dr. William Engelbach, St. John's Hospital Endocrine Adiposity. Clinic of Dr. Borden S. Veeder (Post-Graduate Clinic at Washington University Medical School) The Use of Lactic Acid Milk (Whole Butter-milk) in Infant Feeding Over Long Periods. Clinic of Dr. W. McKim Marriott, St. Louis Children's Hospital. Chronic Digestive Insufficiency (Celiac Disease).

PIQUET'S SYSTEM OF NUTRITION An Outline of the Pirquet System of Nutrition. By Dr. Clemens Pirquet, Professor of Pediatrics at the University of Vienna, Austria. 16mo of 96 pages. Philadelphia and London: W. B. Saunders Company, 1922. Cloth, \$2.00 net.

This is an excellent little manual, by the famous Vienna Specialist who is well known to the profession of America, having recently visited America, delivering lectures on the above subject.

NEWS ITEMS

MEMBERSHIP CAMPAIGN

The membership campaign promised earlier in the year has been under way for several months under the leadership of Mr.

F. N. Standbridge, of the American medical Association.

Mr. Standbridge travels in his own car, and thus is able to go wherever needed.

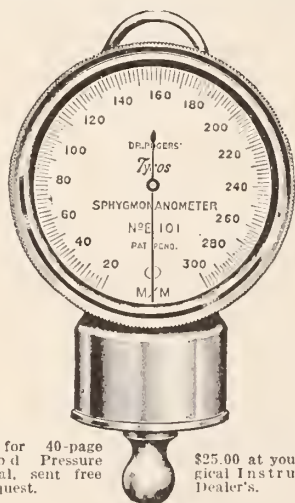
He will leave for a vacation December the seventeenth, but will return early in January and continue the work until the entire State has been covered.

HEART CLINICS FOR SCHOOL CHILDREN

The studies made by Harry B. Schmidt, Detroit (*Journal A. M. A.*, Sept. 16, 1922), of the heart clinics for schoolchildren in Detroit have demonstrated that progressive cardiac failure is usually due to an infectious process in the heart itself. This idea has been sufficient to indicate the importance of eradicating any foci of infection which may be present elsewhere in the body. Such a procedure may, in the future, prove to be the most efficacious measure we possess for preserving cardiac failure in schoolchildren.

VACCINATION OF THE EYELIDS BY HOMO-INOCULATION

James Moores Ball and Noxon Toomey, St. Louis (*Journal A. M. A.*, Sept. 16, 1922), report in detail a case of homo-inoculation in a 5 year old girl.



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UROLOGY DEPARTMENT

(Continued from page 354)

likely take place and they will maintain the kidney in the position in which it has been placed. It is desirable that a portion of fibrous capsule be stripped off which will leave an area for the adhesions to form on.

To summarize, nephropexy is a valuable

procedure but should be reserved for those well and carefully selected cases, ascertained only by the modern urologic methods of diagnosis. The better results now being obtained are then due to the well selected cases for which the operation is done and improvement of the method of doing the operation.

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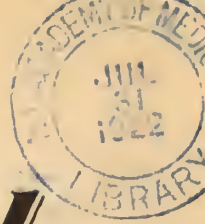
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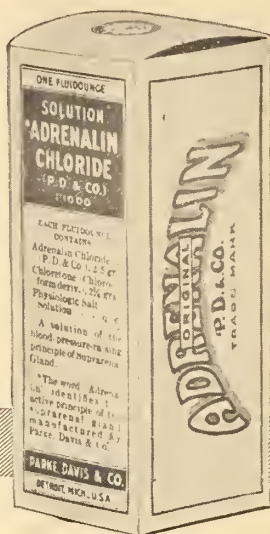
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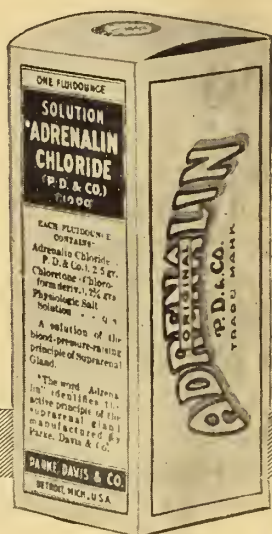
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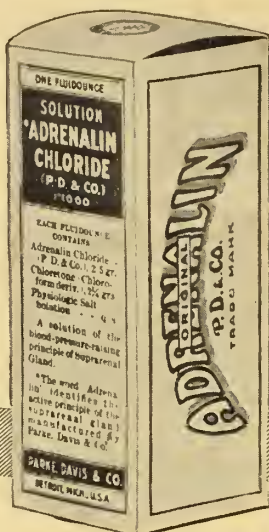
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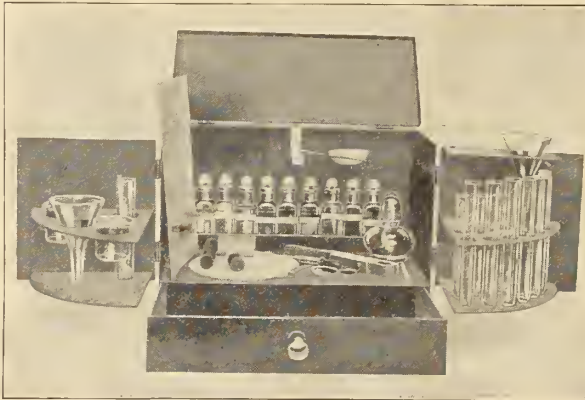
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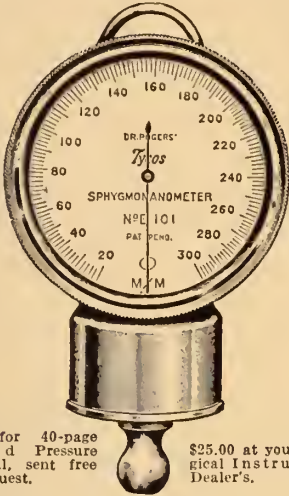
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